PHILOSOPHICAL BASES OF EDUCATION

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Revised and Enlarged

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Preface to Second Edition

As copies of the original edition of this work have acquired scarcity value in the second-hand book market, it is deemed advisable to reissue it. The opportunity has been taken of enlarging it by subdividing and supplementing some of the chapters.

1956 R.R.R.

Preface to First Edition

ALTHOUGH their contents generally belie their titles, the recent publication of a number of works designated "Philosophy of Education" indicates a revival of interest in the subject, and the following pages are presented in the hope of stimulating that interest and directing it along more strictly philosophical lines.

The scientific or naturalistic standpoint has been ably stated in Professor Nunn's *Education: Its Data and First Principles*; the practical or pragmatic in Professor Dewey's *Democracy and Education*; this work offers a restatement of the philosophy of education from the idealistic standpoint.

As the literature on which the argument is based may not always be convenient of access, it has been deemed advisable in general to cite authorities *verbatim*, and to make the references, direct and indirect, as precise as possible.

1928 R.R.R.

Contents

CHAPTER I

The Need for a Philosophy of Education

A NOTEWORTHY feature of the doctrines of the great educators who are also great philosophers, is the emergence, and reflection, of their philosophical views in their educational schemes or in the educational systems of their times. We need only cite Plato's idealism and his cultural scheme of education; rationalism and formal training; empiricism in philosophy and encyclopaedism in education; Rousseau's anti-social philosophy and his negative or natural education; Spencer's hedonism and his discipline by natural consequences; and pragmatism and the project method in education. This connection likewise suggests that the benefit may have been mutual, that in the development of the philosophical thought of such writers their educational ideas may have played a not unimportant part. The latter may have served as a control or corrective of their philosophical views, and their philosophy may have gained as much from their consideration of education as their theory of education from their philosophy. This mutual dependence was affirmed by Fichte in his *Addresses to the German Nation*[1]: "The art of education", he said, "will never attain complete clearness in itself without philosophy. Hence, there is an interaction between the two, and either without the other is incomplete and unserviceable." Dewey has even gone so far as to assert that the most penetrating definition of philosophy which can be given is that

[1] J. G. Fichte, *Addresses to the German Nation*, translated by R. F. Jones and G. H. Turnbull (Chicago and London: The Open Court Publishing Co., 1922), p. 103.

it is the theory of education in its most general phases.[1]

The modern estrangement of philosophy and education is doubtless unfortunate for both. Certain present-day exponents of philosophy affect to despise education, thus betraying the restricted view they take of their own sphere; we need only remind them that such ancient philosophers as Plato and Aristotle, and such modern philosophers as Locke and Kant, to instance but two from each period, did not regard education as a study unworthy of consideration, and that for the sake of both subjects a spirit of mutual toleration had better again be cultivated. Dewey in *Problems of Men*[2] supports this view. "The philosophy of education is not a poor relation of general philosophy even though it is often so treated even by philosophers. It is ultimately the most significant phase of philosophy. For it is through the process of education that knowledge is obtained." Our concern, however, is rather with the dependence of education on philosophy, for, as Spencer[3] has said, true education is practicable only to a true philosopher, and Gentile in *The Reform of Education*[4] has warned us that the belief that men may continue to educate without concerning themselves with the subtle problems of philosophy, means a failure to understand the precise nature of education.

The dogmatism which for long dominated educational thought, "the unanimity of the ignorant", as Spencer phrased it,[5] has passed, and a feverish activity now characterises every aspect of educational endeavour. Investigation and experiment, hydra-like, raise more problems than they

[1] J. Dewey, *Democracy and Education* (New York: The Macmillan Co., 1916), p. 386.

[2] J. Dewey, *Problems of Men* (New York: The Philosophical Library, 1946), p. 165.

[3] H. Spencer, *Education: Intellectual, Moral and Physical* (London: Williams & Norgate, 1906), p. 84.

[4] G. Gentile, *The Reform of Education*, translated by D. Bigongiara (London: Benn Brothers, Ltd., 1923), p. 223.

[5] *Education: Intellectual, Moral and Physical*, p. 71.

solve. To enumerate these problems is impossible, for their name is legion. More urgent, nevertheless, is the need for a reconsideration of the fundamental concepts of the subject. A coordinating, if not a determining, principle is requisite, if we are not to be lost in the maze of modern developments, and such a principle can only be furnished by a philosophy of the subject. Our real study, Rousseau avers,[1] is that of man's estate; and Fichte[2] goes further and regards education as an investigation of the divine will.

Many educationists counsel us to ignore this difficulty. Thus Herbart maintains[3] that education has no time to make holiday till philosophical questions are once for all cleared up. We must, notwithstanding, rather agree with J. S. Mill when he writes[4]: "There is little chance of making due amends in the superstructure of a theory for the want of sufficient breadth in its foundation. It is unphilosophical to construct a science out of a few of the agencies by which the phenomena are determined, and leave the rest to the routine of practice or the sagacity of conjecture. We either ought not to pretend to scientific forms, or we ought to study all the determining agencies equally, and endeavour, so far as it can be done, to include all of them within the pale of the science." Others adopt the sceptical attitude, contending, like Nunn,[5] that as the ideals of life are eternally at variance their conflict will be reflected in educational theories, and concluding therefrom that there can be no

[1] J.-J. Rousseau, *Émile*. Bk. I—"Notre véritable étude est celle de la condition humaine".

[2] G. H. Turnbull, *Educational Theory of Fichte* (University Press of Liverpool, 1926), p. 276.

[3] J. F. Herbart, *Allgemeine Pädagogik*, translated under the title *The Science of Education* by H. M. and E. Felkin (London: Swan Sonnenschein & Co., 1904), p. 108. Later in the same work (p. 195), however, Herbart declares that "we must search for a system of philosophy, the keystone of instruction".

[4] *A System of Logic: Ratiocinative and Inductive*. People's Edition (London: Longmans, Green & Co., 1898), p. 583.

[5] T. Percy Nunn, *Education: Its Data and First Principles* (London: Arnold & Co., third edition, 1945), p. 9.

universal aim of education. This is, however, quite illogical; we admit that when thinkers philosophise about life, they are prone to lay exclusive stress upon one or other of its contradictory aspects,[1] but the cure for these contradictions is not to give up philosophising, but to seek a sounder and more adequate philosophy.

As a man's enemies may be those of his own household, so the most specious arguments against a philosophy of education are those propounded by professed educationists, Freeman plausibly contending that the advances in the science of education will render the philosophy of education redundant, and Dewey paradoxically affirming that philosophy of education has only instrumental significance and is wholly subordinate to practice. Writing on "The Contribution of Science to Education", Freeman says[2]: "I have tried to show that scientific methods have very important contributions to make to a wide range of educational problems. Second, I have tried to show that the philosophical method is at best a provisional method and that it is often substituted for the scientific method in cases where the scientific method is available and is more appropriate." But instead of science and philosophy conflicting or being mutually destructive of each other, they should rather be regarded as complementary; as Whitehead claims[3]: "Science does not diminish the need of metaphysic"; "science only renders the metaphysical need more urgent." "Science and philosophy", he elaborates,[4] "mutually criticise each other, and provide imaginative material for each other. A philosophic system should present an elucidation of concrete fact from which the sciences abstract. Also, the sciences

[1] Nunn, *Education: Its Data and First Principles.*

[2] *School and Society*, vol. xxx, 27th July, 1929, no. 767, pp. 107–12.

[3] A. N. Whitehead, *The Aims of Education* (London: Williams & Norgate, 1932), pp. 229, 231. Cf. *Science and the Modern World* (Cambridge University Press, 1926), p. 194.

[4] *Adventures of Ideas* (Pelican Books, 1942), p. 173.

should find their principles in the concrete facts which a philosophic system presents. The history of thought is the story of the measure of failure and success in this joint enterprise."

In the section of *Sources of a Science of Education* entitled "The Purpose of the Philosophy of Education", Dewey argues[1]: "that philosophy is concerned with determining the ends of education while the science of education determines the means to be used. . . . In the first place, the notion easily gives rise to, even if it does not logically imply, a misapprehension of the relation of a philosophy of education to educational practices and direct experience in the field. In any vital sense it is these practices which determine educational ends. Concrete educational experience is the primary source of all inquiry and reflection because it sets the problems, and tests, modifies, confirms or refutes the conclusions of intellectual investigation. The philosophy of education neither originates nor settles ends." This contention can readily be put to the pragmatic test. If Dewey is right, it is the practical teachers, the workers in the field, who should have originated educational ideals or theories, but the educationists who have revolutionised educational practice—Locke, Rousseau, Herbart, even Dewey himself, were not distinguished as educational practitioners. Dewey, in accordance with his general pragmatic attitude, exalts practice as rich and fruitful at the expense of theory which he characterises as speculative and fantastic. He fails to realise that theory may be very much in advance of, and may decide the direction of, practice. He ignores the long-range projections of the human spirit which mankind at inspired moments has been able to foreshadow and which have not merely effected changes in the situation existing at the time of their origin but have eventually altered the course of the world's history.

[1] J. Dewey, *Sources of a Science of Education* (New York: H. Liveright, 1929), pp. 55–60.

The answer to every educational question is ultimately influenced by our philosophy of life. Although few formulate it, every system of education must have an aim, and the aim of education is relative to the aim of life. Philosophy formulates what it conceives to be the end of life; education offers suggestions how this end is to be achieved.

Nowhere is this dependence of education on philosophy more marked than in the question of the curriculum. In the first chapter of his work on education,[1] Spencer asserts that in the determination of the curriculum "our first step must obviously be to classify, in the order of their importance, the leading kinds of activity which constitute human life". To this principle there can be but little objection. But immediately we seek to grade subjects according to their relative value, to classify them "in the order of their importance", differences of aim and of philosophy emerge and confuse the issues. This is apparent in Spencer's own application of the principle, which, by reason of his somewhat narrow conception both of man's nature and his environment, is unfortunate. Man's nature is regarded as purely individualistic; self-preservation is, for him, the first law of life, hence the subjects which minister to self-preservation are given precedence. Spencer, by reason of his naturalistic philosophy and hedonistic ethics, likewise underestimates the great importance of man's social or cultural inheritance, and as a a result assigns too little value to subjects of the cultural type and to subjects which train for the right enjoyment of leisure. Dewey agrees[2] with Spencer in maintaining that the curriculum must be framed by placing essentials first and refinements second, but from this principle he deduces quite another curriculum emphasising the technological rather than the biological aspects of science.

The interest and activity manifested in the problem of the

[1] *Education: Intellectual, Moral and Physical*, p. 10.
[2] *Democracy and Education*, p. 226.

curriculum in recent times was arrested for want of a philosophical criterion. Thus Bode remarks[1] that unless we have some sort of guiding philosophy in the determination of objectives we get nowhere at all, and Briggs in discussing *Curriculum Problems* says[2]: "It is just here that education seriously needs leaders—leaders who hold a sound comprehensive philosophy of which they can convince others, and who can direct its consistent application to the formulation of appropriate curricula."

Specific curriculum problems likewise demand a philosophy for their satisfactory solution. The controversy regarding the place of imagination in education and the inclusion of fairy-tales in the curriculum is fundamentally a problem in educational philosophy, hence its apparent insolubility. Those who advocate the teaching of fairy-tales assume that the real is material, and that only by withdrawal from the real can the spiritual side of the child's nature find an opportunity for development, whereas when the real is regarded as rational and spiritual, and when the romance of the real is recognised, imagination will not have to depend on mere fantasy for the means of development. Educationists have been wont to maintain that education should prepare for leisure as well as for work, but the philosopher startles us by asserting that the programme of education for leisure is a counsel of despair.[3] The contradiction results from a difference of philosophical standpoint. The philosopher, on the one hand, looking at life from the idealistic standpoint believes that work can, and ought to, be humanised, that man should be able to find satisfaction in his labour, that "we have somehow to discover *there* a theatre for the attainment, if not of the highest, cer-

[1] B. H. Bode, *Modern Educational Theories* (New York: The Macmillan Co., 1927), p. 87.

[2] B. H. Briggs, *Curriculum Problems* (New York: The Macmillan Co., 1927).

[3] H. J. W. Hetherington, "The Incidence of Philosophy on Education", *The Forum of Education*, vol. iv, no. 3, November 1926, p. 191.

tainly of genuine spiritual values". The educationist, on the other hand, has assumed a principle of "compensation", "the theory, namely, that the rewards of many, if not of most, of our occupations are to be found entirely outside the occupations themselves—in high wages, in longer periods of freedom from work, in recreations, hobbies, excitements, interests, studies—anywhere but in the work itself".[1] It is not without significance that almost the best plea ever made for practical work in schools was penned by one of the most idealistic of educational philosophers, namely, Froebel.[2]

Intimately connected with the question of the curriculum is the adoption of appropriate textbooks, and this too involves a philosophy, as Briggs recognised, saying[3]: "Everyone familiar with the ways in which textbooks are selected must be convinced of the need for ideals and standards. The reason they have not been prepared and accepted in practice is the same as that for slow progress in curriculum revision: they must be underlain by an entire and consistent philosophy of education."

As with curriculum, so with method. The outstanding problem in educational method at the present time is the extent to which, if at all, the teacher should intervene in the educative process, and this raises philosophical issues. Non-intervention is justified on two quite different grounds, either by reason of the nature of the pupil's endowment or because of the influence of his environment. Rousseau, Fichte and Froebel all assume that the child's nature is good, and any intervention is consequently harmful, hence the "negative" or preventive education of Rousseau and the "passive" education of Froebel. Montessori adopts the environmentalist standpoint, and assumes that as the environment, comprising the didactic apparatus which she has pre-

[1] Hetherington, "The Incidence of Philosophy in Education."
[2] *The Education of Man.* Cf. also Fichte, *Addresses to the German Nation*, English trans., pp. 34, 183.
[3] *Curriculum Problems*, p. 42.

pared for the child, is ideal and perfectly adapted to evoke only the right type of response and the good impulses of the child, the teacher's intervention is unnecessary and unjustified. The one class believes that the endowment is good or right, the other that the environment is good, but it is at once evident that absolute non-intervention is only justified when both are perfect. The school itself is a form of intervention, and the problem is not whether the teacher's intervention is justified, but whether it is prudent and timely. The intervention in the new education is less obtrusive than in the old; the teacher prepares the environment with greater care and his influence on the pupil is more indirect—acting by means of suggestion rather than by instruction and admonition, and probably for these reasons, not less effective.

Kilpatrick's introduction of the term "philosophy of method", a term which a few years ago would either have been regarded as meaningless or as a contradiction in terms, is suggestive of the intimate connection between educational method and philosophy. The teacher who keeps consciously before himself the aim of education must necessarily realise "the wider meaning of method".[1] Method is merely the process of establishing and maintaining contact between the pupil and the subject-matter, yet through failure to recognise the wider meaning of method, to possess a definite aim in education or an adequate philosophy of life, the very method which some teachers employ, instead of creating in the pupils the right attitude, as Kilpatrick requires, results merely in repelling the pupil from the subject. Teachers who assume that they can afford to ignore philosophy, pay the penalty of their neglect, for their efforts, lacking a co-ordinating principle, are thereby rendered ineffective.

As it was the substitution of measurement for classifica-

[1] W. H. Kilpatrick, *The Foundations of Method* (New York: The Macmillan Co., 1925), chaps. viii, ix.

tion that signalised the inauguration of the scientific age,[1] so it might be presumed that an incompatibility exists between the application of statistical techniques to educational data and an educational philosophy; this would merely be a phase of the general conflict between science and philosophy. Writers on educational measurement nevertheless protest that a philosophy underlies and justifies their procedures. Thus McCall[2] entitles the first chapter of his work on *Measurement* "A Philosophy of Measurement",[3] and a more recent work on educational measurement declares[4]: "If measurement is to continue to play an increasingly important rôle in education, measurement workers must be much more than technicians. Unless their efforts are directed by a sound educational philosophy, unless they accept and welcome a greater share of responsibility for the selection and clarification of educational objectives, unless they show much more concern with what they measure as well as with how they measure it, much of their work will prove futile or ineffective." Measurement is a form of assessment expressed in numerical terms. The unit of measurement appropriate to the data is relative to the object we have in view. The speed of sound in physics is expressed in feet per second, in aeronautics in miles per hour. For work done wages are paid weekly, but salaries monthly or quarterly. Friedman[5] points out that if a carpet is to fit a given room,

[1] A. N. Whitehead, *Science and the Modern World*, p. 37. "The popularity of Aristotelian logic retarded the advance of physical science throughout the Middle Ages. If only the schoolmen had measured instead of classifying, how much they might have learnt. . . . Classification is necessary. But unless you can progress from classification to mathematics, your reasoning will not take you very far."

[2] W. McCall, *Measurement* (A revision of *How to Measure in Education*; New York: The Macmillan Co., 1939), chap. 1, pp. 3–36.

[3] Note, however, his warning of the danger that measurement has tended to spin endlessly about itself a protective web of statistical intricacy, untroubled by any philosophical spark, and undisturbed by the world's travail. *Loc. cit.*, Preface.

[4] *Educational Measurement*, ed. E. F. Lindquist (Washington, D.C.: American Council on Education, 1951), p. 158.

[5] Bertha B. Friedman, *Foundations of the Measurement of Values* (Bureau of Publications, Teachers' College, Columbia University, 1946).

the size is expressed in length and breadth; if it is to be cleaned, it is the area that has to be computed; if the edges are to be bound, it is the perimeter that has to be calculated. Purpose thus governs the procedure and the consideration of human purposes pertains to the sphere of *philosophy*.[1]

Discipline reflects the philosophical prepossessions of an individual or an age more directly than any other aspect of school work. We have already instanced the dependence of discipline by natural consequences on a hedonistic ethics and a naturalistic metaphysics; and freedom in education implies an idealistic philosophy. The general relationship was well expressed by Spencer in the following passage[2]: "There cannot fail to be a relationship between the successive systems of education and the successive social states with which they have co-existed. Having a common origin in the national mind, the institutions of each epoch, whatever be their special functions, must have a family likeness. . . . Along with political despotism, stern in its commands, ruling by force of terror, visiting trifling crimes with death, and implacable in its vengeance on the disloyal, there necessarily grew up an academic discipline similarly harsh—a discipline of multiplied injunctions and blows for every breach of them—a discipline of unlimited autocracy upheld by rods, and ferrules, and the black-hole. On the other hand, the increase of political liberty, the abolition of laws restricting individual action, and the amelioration of the criminal code, have been accompanied by a kindred progress towards non-coercive education; the pupil is hampered by fewer restraints, and other means than punishment are used to govern him. . . . Thus, alike in its oracular dog-

[1] Cf. A. D. Ritchie, *Reflections on the Philosophy of Sir Arthur Eddington* (Cambridge University Press, 1948), p. 33—"It is true that measurement is the most powerful of all scientific tools because it gives precision of statement and makes available all the resources of mathematics. Nevertheless, measurement is not the only tool, and it cannot be used except on the basis of non-metrical notions and operations which are qualitative, not quantitative."

[2] *Education: Intellectual, Moral and Physical*, p. 67.

matism, in its harsh discipline, in its multiplied restrictions, in its professed asceticism, and in its faith in the devices of men, the old educational régime was akin to the social systems with which it was contemporaneous; and similarly, in the reverse of these characteristics, our modern modes of culture correspond to our more liberal religious and political institutions."

Of greater significance than political considerations for the type of discipline exercised in school is the attitude adopted concerning the nature of man. The naturalist in philosophy denying the validity of moral standards would allow the innate or instinctive tendencies of the child to assert themselves; the pragmatist refusing equally to admit such standards relies for the control of the pupil's behaviour on social approval; the idealist, on the other hand, finds his explanation of human behaviour incomplete without admitting the paramount influence of ethical ideals, and regards it as his duty to lead the child to recognise such moral standards and to train him to realise these gradually in his conduct. The specific problem posed by Dewey, "How Much Freedom in the New Schools?"[1] manifestly depends for its solution on the type of freedom one approves of, and this ultimately turns on our analysis of human experience.

From every angle of the educational problem comes thus the demand for a philosophical basis of the subject. There is no escape from a philosophy of life and of education.[2] Those who pride themselves on their neglect of philosophy have their own philosophy—usually a quite inadequate one. Every man, as Schopenhauer says, is a born metaphysician, and as Hume had earlier warned us,[3] we must cultivate true

[1] *The New Republic*, 9th July, 1930.

[2] Whitehead, *Adventures of Ideas*, p. 257: "Speculative Philosophy can be defined as the endeavour to frame a coherent, logical necessary system of general ideas in terms of which every element of our experience can be interpreted."

[3] *An Inquiry Concerning Human Understanding*, section 1.

metaphysics with some care in order to destroy the false and adulterate. "There are some people, and I am one of them," says Chesterton,[1] "who think that the most practical and important thing about a man is still his view of the universe. We think that for a landlady considering a lodger it is important to know his income, but still more to know his philosophy. We think that for a general about to fight an enemy it is important to know the enemy's numbers, but still more important to know the enemy's philosophy. We think the question is not whether the theory of the cosmos affects matters, but whether in the long run anything else affects them." There is probably no worker whose practice is more affected by his philosophy than the teacher's; it consequently behoves him to secure as adequate a philosophy as he can command.

[1] G. K. Chesterton, *Heretics* (London: John Lane, 1914), pp. 15–16.

CHAPTER II

Materialism

SCHOOLS of philosophy originate from the adoption by their adherents of different standpoints from which experience is viewed or by the application of different categories in accordance with which experience is interpreted. Materialism is the philosophical position of those who approach philosophy from the standpoint of nineteenth-century science; they carry the natural law into the spiritual world, and apply to the whole of experience concepts valid only in a restricted sphere; they reduce distinctively rational and spiritual processes to purely physical functions; matter in its crude form is regarded as the first word and final explanation of all the problems of existence. With its greater insight into the structure of the atom, scientific thought now rejects materialism as an antiquated and inadequate account of the physical world,[1] and some mathematicians and physicists would substitute for it a philosophical doctrine designated the "new realism". An alternative philosophic outlook is afforded by naturalism which in its interpretation of the universe replaces the concepts of physical science by such biological principles as instinct, growth, adaptation and development. Pragmatists, like James, combine the methods of naturalism with the conclusions of idealism, or, like Dewey, with the advances in the technological sphere. Scepticism, while it has a stimulating influence on general philosophical development, is without significance for the philosophy of

[1] Cf. Bertrand Russell, *The Analysis of Mind* (London: George Allen & Unwin, Ltd., 1921). Preface: "The old-fashioned materialism can find no support from modern physics."

education, as it tends to paralyse action, and the educative process, being essentially a practical activity, resolves the perplexities, propounded by the sceptic, simply by ignoring them.[1]

Whereas men of science tend to materialism, to realism or to naturalism, professional philosophers incline to idealism. The reason for this has been advanced by Kemp Smith.[2] "The first steps towards naturalism are easy and convincing. Naturalism takes the present results of the positive sciences at what appears to be their face-value, and from them it professes to obtain data sufficient for the establishment of a comprehensive philosophy. When, however, this philosophy is applied in interpretation of the more intimate aspects of human experience, it becomes ever-increasingly unsatisfactory. With idealism, on the other hand, the first steps are the most difficult. Its final conclusions exceed the insight yet yielded by the positive sciences, but do not contradict them; and it may be claimed that they are based upon a more thorough study of those features of our experience which have not yet been subjected to scientific treatment."

Two characteristics serve to distinguish idealism from materialism and naturalism; it is more comprehensive, as Kemp Smith in the passage just quoted has suggested, not stopping short in its explanations at what can be reduced to scientific form and leaving unaccounted for such factors as man's creative capacity in the intellectual sphere and his freedom in the moral sphere; it also shifts the centre of gravity from the natural or scientific sphere to the spiritual aspects of experience. Instead of, like naturalism, asking "Why has the body a mind?" idealism asks, "Why has the

[1] Cf. Bertrand Russell, *Our Knowledge of the External World* (London: George Allen & Unwin, Ltd., 1926), p. 74: "Universal scepticism, though logically irrefutable, is practically barren."

[2] N. Kemp Smith, *The Present Situation in Philosophy* (Edinburgh: Jas. Thin & Son, 1920), p. 30.

mind a body?" It contends that in the characteristics which differentiate man from the rest of creation is to be found the key to the riddle of the universe, that in the specifically human experiences the nature of reality is pre-eminently disclosed, that culture, morality, art and religion are the highest manifestations of the cosmos.

As the simplest approach to the problems of philosophy is from the common-sense view of the world and from science, we should in accordance with the principles of teaching procedure consider materialism first. Materialism is as old as Democritus (*circa* 460–370 B.C.) who declared that atoms and the void constituted all there is. It was, however, the unprecedented advances made by physics and chemistry at the beginning of the nineteenth century that led men to conclude that all phenomena would ultimately be reducible to matter and motion. Materialism also derived a certain plausibility because it employed the methods of the "exact sciences"; these were believed to have a precision and possess a power of prediction denied to other spheres of thought, for example, the biological and sociological. Precision and predictability are not, however, peculiar to the physical sciences; the process of identifying and tracing genes in an organism does not suffer in comparison with the detection of electrons or any other constituents of matter. The precision of the physical sciences is also bought at the price of comprehensiveness. As Whitehead explains[1]: "It [the mechanical explanation of the universe] is not wrong, if properly construed. If we confine ourselves to certain types of facts, abstracted from the complete circumstances in which they occur, the materialistic assumption expresses these facts to perfection. But when we pass beyond the abstraction, either by more subtle employment of our

[1] A. N. Whitehead, *Science and the Modern World* (Cambridge University Press, 1926), p. 22.

senses, or by the request for meanings and for coherence of thought, the scheme breaks down at once." Matter, as conceived by the materialist, is "senseless, valueless, purposeless"[1]; it is accordingly quite insufficient to serve as a basis of a complete account of life and mind. It is not now regarded by physicists as the ultimate constituent of the world; "it is merely a convenient way of collecting events into bundles".[2]

Materialism also fails to account for organic life. Organisms tend to persist and to reproduce themselves; this persistent maintenance and reproduction which are characteristics of life, cannot be satisfactorily expressed in terms of matter and energy.[3] The physical sciences can provide useful, but only partial, explanations of the phenomena of life. Biological interpretation works at a higher level since it seeks to explain animal behaviour and consciousness, and accordingly affords a truer account of the reality we meet with in nature.[4] A modern physicist also claims that even the behaviour of the atoms within a living organism is not analogous to their behaviour in a physics laboratory.[5]

If the developments in nuclear physics have disposed of the materialistic conception of matter, they have likewise completely undermined the collateral conception of energy. As according to the second law of thermodynamics the total energy of the universe was continuously being transformed from higher to lower forms, one day the unwinding

[1] Whitehead, *Science and the Modern World.*

[2] Bertrand Russell, *History of Western Philosophy* (London: George Allen & Unwin, Ltd., 1946), p. 684.

[3] J. S. Haldane, *Materialism* (London: Hodder & Stoughton, Ltd., 1932), p. 204. Also E. D. Adrian, "Science and Human Life", Presidential Address, British Association, 1954: "It is when we begin to think of organisms rather than molecules that we seem to part company with mechanism."

[4] H. S. Jennings, *The Universe and Life* (Yale University Press, 1933), p. 33.

[5] E. Schrödinger, *What is Life? The Physical Aspect of the Living Cell* (Cambridge University Press, 1944), p. 79: "We are here obviously faced with events whose regular and lawful unfolding is guided by a 'mechanism' entirely different from the 'probability mechanism' of physics."

of the vast machine would cease and all life on this planet disappear. Elements like uranium nevertheless emit radiation without loss of mass, and an inexhaustible source of energy has been discovered in the nucleus of the atom. How hollow now sound the materialists' forebodings so eloquently expressed by Lord Balfour in his *Foundations of Belief*.[1] "The energies of our system will decay, the glory of the sun will be dimmed, and the earth, tideless and inert, will no longer tolerate the race which has for a moment disturbed its solitude. Man will go down into the pit, and all his thoughts will perish. The uneasy consciousness which in this obscure corner has for a brief space broken the contented silence of the universe, will be at rest. Matter will know itself no longer. 'Imperishable monuments' and 'immortal deeds', death itself, and love stronger than death, will be as if they had not been. Nor will anything that is, be better or worse for all that the labour, genius, devotion and suffering of man have striven through countless ages to effect." Such a philosophy with its pessimistic conclusions, had it persisted and become universal, would have tended to atrophy human effort; fortunately it is being generally abandoned, modern science having given mankind, in addition to a new source of energy, at least a respite from the doom foretold by the materialists.

The physical laws which materialism claimed to be universally valid are now seen to be of limited application. Every process was believed to be determined by the inexorable logic of cause and effect, and the same cause was assumed to produce inevitably the same effect. Kant nevertheless argued that whereas the category of cause was appropriate to phenomena, that is, in the scientific field, freedom was possible in the moral sphere. Modern physics likewise places a restriction on causality, leaving open the

[1] A. J. Balfour, *The Foundations of Belief* (London: Longmans, Green & Co., 1895), p. 30.

possibility of probability ruling in the atomic system. Psychology demonstrates that the same cause by reason of the retention of previous experiences may, on repetition, have quite different effects. Bertrand Russell regards sensations and images as the only ultimate ingredients of our mental life, and distinguishes images from sensations by the fact that they have a different type of causality: "Their causes and effects do not follow physical laws."[1]

Whether the materialist regards dreams as real or not, they at least occur, and their course is determined not according to the physical law of cause and effect but by what appears to be the most casual associations. The interaction of the physical (or physiological) and the psychical constitutes the field of psychosomatic medicine; if a physical disability occasions a mental illness, an unconscious fear may paralyse a limb. But which is the cart and which the horse is left to philosophy to decide. That mind can affect matter psychosomatic medicine is nevertheless clearly convinced.

But from the fact that communism has adopted a form of materialism for its philosophy, the traditional materialism might have been left to disintegrate by the investigations of molecular physics. In education the danger nevertheless is that teachers of science, concerned mainly as they are with classical mechanics, may succumb to determinism. Dewey has warned them against neglect of the biological sciences—and even greater danger may arise from a false philosophy: thus he says[2]: "Only harm can result from the attempt to build up a scientific content of education that skips over the biological sciences and allies itself with the physical and mathematical, those furthest remote from the needs, problems and activities of human beings."

[1] *The Analysis of Mind*, p. 144. Cf. p. 172: "Causal laws of psychology are *prima facie* very different from those of physics."

[2] J. Dewey, *Sources of a Science of Education* (New York: M. Liveright, 1929), p. 66.

CHAPTER III

The New Realism

THE new realism is a refinement of nineteenth-century materialism. Its aim is to expound a philosophy which is not inconsistent with the facts of common life and with the developments in physical science. It can be contrasted with the old realism which was idealistic. The issue in the medieval controversy between nominalism and realism was whether mental concepts—the "intelligible" world of Plato, were, as the realists affirmed, the true realities, or whether, as the nominalists contended, the concrete particulars from which the mental concepts were derived, were the only objects to which reality could be ascribed, the concepts themselves being mere class names and having only a subjective existence. The medieval realists thus believed in the reality of "objects of a higher order", and accordingly can be regarded as the true successors of Plato.

The method which the new realists apply to the problems and philosophy is the scientific method. This Bertrand Russell, who aligns himself with the new realists,[1] terms the logical-analytic method.[2] It is a method which is nevertheless foredoomed to failure, and to result, as Russell acknowledges,[3] in a very fragmentary view of the world, in a disintegration of experience, or in "logical atomism",[4] whereas a philosophical method should provide a synoptic view of the universe; it is an analytic procedure,[5] whereas

[1] *The Analysis of Mind* (London: George Allen & Unwin, Ltd., 1921), p. 20: "I remain a realist as regards sensation, but not as regards memory or thought."

[2] *Our Knowledge of the External World* (London: George Allen & Unwin, Ltd., 1922), preface.

[3] *The Analysis of Mind*, p. 80.

[4] *The Analysis of Mind*, p. 14.

The Analysis of Mind, p. 18.

the method of philosophy must be synthetic and constructive.

Russell[1] contends that something different from the traditional procedures is required "if philosophy is to become a science", but philosophy does not pretend to be a science; its aim is "the theoretical understanding of the world".[2] Philosophy, as Russell himself admits,[3] is general and takes an impartial interest in all that exists. " 'Philosophy'," he says,[4] "is not a short cut to the same kind of results as those of other sciences; if it is to be a genuine study, it must have a province of its own, and aim at results which the other sciences can neither prove nor disprove. . . . What it can do . . . is to help us to understand the general aspect of the world and the logical analysis of familiar but complex things."[5]

Any satisfactory philosophy must be consistent with the findings of modern science, but it need not be wholly identified with science. There may be realms of experience which are not yet, and may never be, amenable to the instruments of physical science, and philosophy must have regard to these. As Whitehead repeats[6]: "Philosophy is not one among the sciences with its own scheme of abstractions which it works away at perfecting and improving. It is a survey of sciences, with the special objects of their harmony, and of their completion. It brings to this task, not only the evidence of the separate sciences, but also its

[1] Preface to *Our Knowledge of the External World.* F. S. Breed in the *Forty-first Yearbook of the National Society for the Study of Education*, Part I, "Philosophies of Education" (Bloomington: Public School Publishing Company, 1942), p. 91, says: "Philosophy is continuous with science . . . the subject has neither materials nor methods peculiar to itself." And he adds that B. Russell has christened realism "a scientific philosophy".

[2] *Our Knowledge of the External World*, p. 36.

[3] *Our Knowledge of the External World*, p. 26.

[4] *Our Knowledge of the External World*, pp. 27–8.

[5] Russell nevertheless tends to forget "the general aspect of the world" and is inclined to concentrate on the logical analysis of familiar but complex things.

[6] *Science and the Modern World* (Cambridge University Press, 1926), pp. 126–7.

own appeal to concrete experience. It confronts the sciences with concrete fact."

The contention of the new realist is that reality can exist independently of mind. The new realism does not, like materialism, deny the existence of mind but merely maintains that in addition to mental factors there is an irreducible residuum uninfluenced by any mental elaboration. It ignores the higher mental activities and the wider experience which transcends sensory-perception. It is in the latter alone that they seek the real. This has led Whitehead[1] to remark that sense-experience for all its practical importance is very superficial in its disclosure of the nature of things, and he complains[2] that "such thinkers repudiate our intimate vague experiences in favour of a mere play of distinct sensations with a fable about underlying reality".

Of the various modes of sensory-perception the new realists concentrate upon sight, the most clear-cut, but, according to Whitehead,[3] the information provided by sight is "comparatively superficial" and "peculiarly barren". The new realists' account excludes not only the physiological processes involved in vision but also all the really fundamental factors constituting our experience.[4]

Although in actual experience we never encounter sensations in isolation, the illustration on which the argument of a new realist like G. E. Moore in his *Philosophical Studies*[5] relies is a patch of colour—blue or green; this, he maintains, can exist independently of being perceived. The mind is not, however, built up of isolated impressions; sensory percepts are the products of the gradual differentiation of a continuum, or, as the Gestalt psychology maintains, the

[1] *Modes of Thought* (Cambridge University Press, 1938), p. 181.
[2] *Modes of Thought*, p. 43. [3] *Modes of Thought*, pp. 155, 216.
[4] Cf. *Adventures of Ideas* (Pelican Books 1942), p. 322. "Sense-perception, despite its prominence in consciousness, belongs to the superficialities of experience."
[5] G. E. Moore, *Philosophical Studies* (London: Kegan Paul, Trench, Trübner & Co., 1921), ch. v.

meaning of any psychical element is conditioned by the combination in which it is embodied. A patch of colour is a pure abstraction, and could exist independently only in Moore's imagination;[1] in actual experience it inheres in a material or appears on the surface of an object. The sensory inflow is never simple. The atomic conception of mind is as outdated as the atomic view of matter.

Other new realists concede that visual perception does not unequivocally reveal the real. Apart from the subjectivity of secondary qualities, an illusion like the overestimation of the length of vertical lines relatively to horizontal compels them to recognise the subjective aspect of visual perception. They accordingly rely on tactual perception, arguing that there exist real counterparts to the figures which all people agree in perceiving by touch, and that we have in such perception immediate contact with the real.[2] Motor or tactual perception is nevertheless beset by analogous difficulties to those of sight. Experiment discloses that a displacement of a touch impression occurs when another touch impression is simultaneously presented,[3] and investigations on tactile localisation show that spatial orientation is subject to "conceptual contamination".[4] As Whitehead declares[5]: "We can discern no clean-cut sense-perception wholly concerned with present fact."

In the new realism a distinction is sometimes drawn

[1] Moore (*Philosophical Studies*, p. 235) uses as illustration two coins lying on the ground, but the visual appearance of these is modified by reason of what Thouless has termed "phenomenal regression" (*Br. Jr. of Psychology*, vol. xxi, pp. 339–359, vol. xxii, pp. 1–29, April and July, 1931); it is a compromise between perspective appearance and earlier tactual experiences.

[2] C. D. Broad, *Perception, Physics and Reality* (Cambridge University Press, 1914), p. 275, cf. p. 263—there is one to one correspondence between geometrical distinctions in the object of tactual perception and certain permanent ones in the reality.

[3] W. Köhler, *Dynamics in Psychology* (London: Faber & Faber, Ltd., 1939), p. 47.

[4] A. Elithorn, M. E. Piercy and M. A. Crosskey, "Tactile Localisation", *The Quarterly Journal of Experimental Psychology*, vol. v, pt. 4, November 1953, pp. 171–82.

[5] *Adventures of Ideas*, p. 211. The section is headed "Non-Sensuous Perception".

between a sensation and a sense-datum and it is claimed that the reals are found in sense-data.[1] Russell confesses in *Our Knowledge of the External World*[2] that whereas he formerly adopted this position, for reasons advanced in *The Analysis of Mind*[3] he has come to abandon the distinction and to regard the sense-datum as identical with the sensation. A sense-datum is a metaphysical figment. In our perceptual experience there are on the objective side, for example, merely light radiations, and on the subjective side, sensations of colour. It is unwarrantable to interpose a *tertium quid* between the physical stimulus and the experienced sensation; the sense-datum is just a third wheel to the cart. Its hypostatisation is evidence of the shifts to which the new realists have to resort to substantiate their conviction that aspects of reality unaffected by mind do exist.[4]

Broad's view that tactual objects of perception are real[5] has at least the recommendation of verbal accuracy, since it recognises that perception, not sensation, is the primary cognitive process. This was repeatedly affirmed by Peirce, the initiator of pragmatism.[6] The starting-point of all our reasoning is not in sense-impressions but in our percepts; what certain writers consider to be first impressions of sense are really nothing of the sort but are products of psychical operation[7]; our logically initial data are percepts;[8] and, our very percepts are the results of cognitive elaboration.[9] Köhler[10] declares that a theory of perception must be

[1] G. E. Moore would substitute the term "sensible" for sense-datum. A patch of colour would be a "sensible".

[2] p. 83.

[3] e.g. pp. 141 *et seq.*

[4] A. N. Whitehead (*Modes of Thought*, p. 156): "When sense-data appear, we send for a doctor!" Of sense-data, he says in *Adventures of Ideas*, p. 250: "Unfortunately the learned tradition of philosophy has missed their main characteristic, which is their emotional significance." And (p. 270): "Inevitably perception is clothed with emotion."

[5] *Perception, Physics and Reality*, p. 263.

[6] J. Buchler, *The Philosophy of Peirce: Selected Writings* (London: Kegan Paul, Trench, Trübner & Co., Ltd., 1940), pp. 308–9.

[7] *The Philosophy of Peirce*, p. 268.

[8] *The Philosophy of Peirce*, p. 308.

[9] *The Philosophy of Peirce*, p. 256.

[10] *Dynamics in Psychology*, p. 40.

a field theory, and Dewey, criticising the new realism for its assumption that sense-data yield absolute certainty, points out that this view is wrong because it disregards the fact that knowledge is contextual.[1] In *Problems of Men*[2] he explains: "The sensory aspect of knowledge is strictly an *aspect*. It is distinguishable in intellectual analyses that are undertaken for special purposes. But it is not, as it was long taken to be, a special kind of knowledge, nor yet a separate component in knowledge. It is that aspect of the system of knowledge, in and by which knowledge extending across an indefinitely extensive spatial and temporal range of facts is anchored and focalised in that which is *here and now*. Without demonstrated anchorage of this sort, any system, no matter how well organised, with respect to internal consistency, is 'theoretical' in the sense of being hypothetical."

The perceptual process is a highly complex constructive mental activity—the simple sensation being a psychological myth.[3] The "given" elements of a perceptual experience are so intimately associated by assimilation or complication with the prepercept—the detritus in consciousness of previous perceptual experiences, that it is only by theoretical analysis or when illusions mislead us, that we become aware of the presence of interpretative aspects. The spatial background modifies whatever is projected against it, as when a grey patch on a red background appears greenish; what precedes in time affects what is at present in the field of

[1] *John Dewey, Philosopher of Science and Freedom: A Symposium.* Edited by Sidney Hook (New York: The Dial Press, 1950), p. 219. See also J. Dewey, *Philosophy and Education* (New York: G. P. Putnam's Sons, 1931), pp. 188–201, "A Naturalistic Theory of Sense-perception"; pp. 233–48, "The Unit of Behaviour".

[2] J. Dewey, *Problems of Men* (New York: The Philosophical Library, 1946), p. 293.

[3] "The pure sensation we may regard as a psychological myth; and the simple image, or such sensation revived, seems equally mythical." James Ward, *Psychological Principles* (Cambridge University Press, 1918), p. 143. Cf. A. N. Whitehead, *The Aims of Education* (London: Williams & Norgate, 1929), p. 187: "The perceived object is largely the supposition of our imagination."

perception[1]; our needs, our hopes and our fears, our desires decide to some extent what we shall see or not see, even the cultural values current in the community to which we belong are not without their influence; our whole personality is involved in the activity of perception. Isolationism is the psychologist's as well as the politician's fallacy.

By reason of the fact that the path of an electron is disturbed by our observation of it, "the present situation in physics", says Bohr,[2] "has reminded us emphatically of the truth that we are both spectators and players in the great drama of existence". The same holds of perception; we are both spectators and players in the drama of existence.

Bertrand Russell admits[3] that much of what at first sight seems to be given is really inferred. He accordingly extracts from perception by psychological analysis the sensation; "the sensation is a theoretical core in the actual experience[4]; the actual experience is the perception."[5] It is in sensation that he seeks the real. In his *Analysis of Mind*[6] he transmutes even the particles of the atom into sensations: "I contend that the ultimate constituents of matter are not atoms or electrons but sensations, and other things similar to sensations as regards extent and duration." All the contents of our mental life are likewise reducible to sensations; "I believe that the stuff of our mental life, as opposed to its relations and structure, consists wholly of sensations and images"[7]; "thoughts, beliefs, desires, pleasures, pains and emotions are all built up out of sensations and images."[8]

[1] Cf. Köhler, *Dynamics in Psychology*.

[2] Quoted by Ernest Zimmer, *The Revolution in Physics*, translated by H. S. Hatfield (London: Faber & Faber, Ltd., 1936), p. 227.

[3] *Our Knowledge of the External World*, p. 25.

[4] *The Analysis of Mind*, p. 157. Russell's contention that the sensation is a *theoretical* core would seem to stultify the new realists' contention that the real is not a mental construction.

[5] *The Analysis of Mind*, p. 132.

[6] p. 121.

[7] *The Analysis of Mind*, p. 109.

[8] *The Analysis of Mind*, p. 121. Although Russell distinguishes images from sensations since they do not exemplify the same causal laws, he maintains that they

For Russell all the aspects of a thing, all the particular facts of science, are real, whereas the thing itself is a mere logical construction.[1] The "aspects" are nevertheless aspect *of a thing*; no single aspect exists apart from association with other aspects; thus a colour does not appear in isolation; its presence depends on its combination or correlation with other sensations. Only in Wonderland can the grin appear apart from the cat. The correlation of the various aspects is essential to the constitution of the object.[2] Russell throughout avails himself of the mind's capacity to correlate the particular facets of sense, but ignores this capacity in his account of reality. He is accordingly left only with a series of discrete or detached sensations that have no significance and no actual existence. Reality has eluded his analysis of the perceptual situation. Whitehead[3] sums up the criticism of Moore, Russell and Broad in the categorical statement: "Those elements of our experience which stand out clearly and distinctly in our consciousness are not its basic facts; they are the derivative modifications which arise in the process."

The doctrine of the independent nature of the sensation is derived from Hume[4] for whom each impression made on the mind is a distinct existence; the "cohesion of parts" which unifies the qualities of an object into a thing and the

do not differ from each other intrinsically (pp. 109–10). "There is reason to think that images do not differ from sensations in their intrinsic character. We thus effect a mutual *rapprochement* of mind and matter." (p. 121.)

"In themselves they do not differ profoundly, and there is no reason to invoke two different ways of knowing for the one and for the other." (p. 110.)

[1] *Our Knowledge of the External World*, p. 96. Cf. "What is really known [of a table] is a correlation of muscular and other bodily sensations with changes in visual sensations"—p. 85. Chesterton in *Heretics* (p. 38) says: "If we talk of a certain thing being an aspect of truth, it is evident that we claim to know what is truth, just as, if we talk of the hind leg of a dog, we claim to know what is a dog.'

[2] Broad, *Perception, Physics and Reality* (p. 95), likewise has recourse to the correlating activity of mind: "We need more than direct perception to tell us that the coloured surface and the hot surface are one and the same."

[3] *Process and Reality: An Essay on Cosmology* (Cambridge University Press, 1929), p. 226.

[4] 1711–76.

regular conjunction of such qualities is for Hume effected by an unknown power. This is empiricism, and by reason of the prominent place assigned to sensation in Russell's system he has by Dewey been classified with the empiricists.[1]

Russell denies,[2] however, that all our knowledge is derived from the senses and dependent on them. He affirms that there is general knowledge not derived from sense, and that some of this knowledge is not obtained from inference, but is primitive. He also accepts "the reality of relations".[3] Amongst his "hard data", that is, those which cannot be derived and which resist the solvent influence of critical reflection, he includes in addition to the particular facts of sense, the general truths of logic,[4] but he makes no further use of the logical principles in the construction of his philosophical system. Had he done so, he might have escaped the accusation of empiricism but it would have taken him on the road to idealism.

Modern psychology assumes[5] that the thought of something is an irreducible fact of experience. We have accordingly as much justification for basing a philosophy on thinking as on sensation. And if supra-sensory perception is established, perception becomes a purely psychical occurrence, and the new realism is thereby completely undermined.

Whitehead has contended[6] that any philosophy must provide some doctrine of personal identity, and he charges writers who fail to include such with dualism[7]: "We should either admit dualism, at least as a provisional doctrine, or

[1] *John Dewey, Philosopher of Science and Freedom: A Symposium*, p. 219. "The rationalist position has been attacked by British empiricists, by David Hume, John Stuart Mill, Bertrand Russell."

[2] *Our Knowledge of the External World*, p. 66.

[3] *Our Knowledge of the External World*, p. 59.

[4] *Our Knowledge of the External World*, p. 78.

[5] George Humphrey, *Thinking: An Introduction to Its Experimental Psychology* (London: Methuen & Co., Ltd., 1951), p. 58.

[6] *Adventures of Ideas*, p. 217.

[7] *Adventures of Ideas*, p. 215.

we should point out the identical elements connecting human experience with physical science." When Russell passes from the reality of the aspects of an object to the issue of the existence of other people's minds, he concludes[1] that it is an hypothesis which systematises a vast body and never leads to any consequences which there is reason to think false. But he fails to integrate the existence of other selves with his doctrine of perception, and must accordingly, on Whitehead's ruling, be convicted of dualism. This accounts for the fact that Russell's writings on education are completely divorced from his metaphysical doctrine—a significant exception to the general principle enunciated in our first chapter.

Whitehead is generally classed as a new realist and in justification a statement in *The Aims of Education*[2] might be adduced, namely, that the material world is largely a concept of the imagination which rests on a slender basis of direct sense-perception. It might be inferred from this that it is in sense-perception that the real is disclosed, but such an inference would entirely misrepresent Whitehead's position. Although he declares[3] that our problem is to fit the world to our perceptions, and not our perceptions to the world, he keeps emphasising that perception at its best can give us only a very partial experience of the real: "What is really actual are the immediate experiences."[4] In *Adventures of Ideas*[5] he affirms that the basis of experience is emotional, and he condemns the disastrous abstraction of our bare sense-perception from the massive insistency of our total experiences. His own form of realism is doubtless most clearly formulated in Section IX of Part III, Chapter XI, in *Adventures of Ideas* headed "Objects and Subjects". There he states: "Two conditions must be fulfilled in order that an

[1] *Our Knowledge of the External World*, p. 103.
[2] p. 199.
[3] *The Aim of Education*, p. 247.
[4] *The Aim of Education*, p. 242.
[5] pp. 205, 255.

entity may function as an object in a process of experiencing: (1) the entity must be *antecedent*, and (2) the entity must be experienced in virtue of its antecedence; it must be *given*. Thus an object must be a thing received, and must not be either a *mode* of reception or a thing *generated* in that occasion. Thus the process of experiencing is constituted by the reception of objects into the unity of that complex occasion which is the process itself. The process creates itself, but it does not create the objects which it receives as factors in its own nature."

Whitehead is credited by Breed[1] with reconciling pragmatism and realism by adopting much that is precious in pragmatism while avoiding its anti-intellectualism, and, withal, remaining realistic. But for pragmatism Whitehead has no use, and he is a very incisive critic of the new realists who base their metaphysical systems on such a delicate fulcrum as a sensory stimulus or on sense-data. Whitehead is best regarded as effecting the transition from realism to idealism. In *Science and the Modern World*,[2] he declares: "It is the foundation of the metaphysical position which I am maintaining that the understanding of actuality requires a reference to ideality" and in the Preface to *Process and Reality* he asks whether the type of thought he is there presenting is not a transformation of some main doctrines of absolute idealism on to a realistic basis. In *Science and the Modern World*[3] he explains his position more fully in these terms: "The distinction between realism and idealism does not coincide with that between objectivism and subjectivism. Both realists and idealists can start from an objective standpoint. They may both agree that the world disclosed in sense-perception is a common world, transcending the individual recipient. But the objective idealist, when he

[1] *The Forty-first Yearbook of the National Society for the Study of Education*, Part I, *Philosophies of Education*. "Education and the Realistic Outlook," p. 92.
[2] p. 228. [3] (Cambridge University Press, 1926), p. 112.

comes to analyse what the reality of the world involves, finds that cognitive mentality is in some sense inextricably concerned in every detail. This position the realist denies. Accordingly, these two classes of objectivists do not part company till they have arrived at the ultimate problem of metaphysics. There is a great deal which they share in common. That is why . . . I said that I adopted a position of provisional realism."

Whitehead's philosophy is a protest against the radical inconsistency at the basis of modern thought whereby "a scientific realism, based on mechanism, is conjoined with an unwavering belief in the world of men and of the higher animals as being composed of self-determining organisms".[1] This inconsistency he would overcome by basing nature upon the concept of organism and not upon the concept of matter. "The doctrine which I am maintaining is that the whole concept of materialism only applies to very abstract entities, the products of logical discernment. The concrete enduring entities are organisms, so that the plan of the *whole* influences the very characters of the various subordinate organisms which enter into it. In the case of an animal, the mental states enter into the plan of the total organism and thus modify the plans of the successive subordinate organisms until the ultimate smallest organisms, such as electrons, are reached. . . . This doctrine involves the abandonment of the traditional scientific materialism, and the substitution of an alternative doctrine of organism"[2]: "The doctrine of organism is an attempt to describe the world as a process of generation of individual actual entities, each with its own absolute self-attainment."[3]

[1] *Science and the Modern World*, p. 110. Cf. p. 225: "The divorce of science from the affirmations of our aesthetic and ethical experiences."

[2] *Science and the Modern World*, pp. 115–16. Cf. p. 93: "My point is that a further stage of provisional realism is required in which the scientific scheme is recast, and founded upon the ultimate concept of *organism*."

[3] *Process and Reality*, p. 83.

Whitehead has extended the denotation of the concept "organism" to include physical structures. Thus he says[1]: "Science is taking on a new aspect which is neither purely physical, nor purely biological. It is becoming a study of organisms. Biology is the study of the larger organisms; whereas physics is the study of smaller organisms." The special reciprocity associated with the notion of organism is not restricted to the biological realm but is universal and characterises the part-and-whole relation of the physical aspects of nature.[2]

The cosmological doctrine of organism is "a protest against the idea that the abstractions of science are irrefutable and unalterable".[3] Is it not possible, Whitehead asks,[4] that the standardised concepts of science are only valid within narrow limitations, perhaps too narrow for science itself? The doctrine of organism is likewise a protest against the dissection of nature into fragmentary discrete entities existing in isolation; the primordial or ultimate is, for Whitehead, a continuum from which emerge all actualities with aesthetic as well as physical attributes.[5] These aspects, like the monads of Leibniz, mirror the whole and one another, and the whole in turn is influenced by them. "Each actual entity is a throb of experience including the actual world within its scope."[6]

The biological correlates of organism and environment play a prominent part in the philosophy of naturalism, but Whitehead's conception of organism cannot be contrasted with, or considered apart from, environment since it includes nature. It is all-comprehensive, although certain features are distinguishable in it.

[1] *Science and the Modern World*, p. 150.
[2] *Science and the Modern World*, p. 214.
[3] *Science and the Modern World*, p. 121.
[4] *Science and the Modern World*, p. 122.
[5] Cf. *Science and the Modern World*, p. 127—"nature cannot be divorced from its aesthetic values". Also p. 137 —"aesthetic attainment is interwoven in the texture of realisation".
[6] *Process and Reality*, p. 269.

Berkeley taught that it was the mind that unified the qualities of an object into a thing and had denied that there was any need of a material substratum for this purpose. For Berkeley's "mind" Whitehead substitutes "a process of prehensive unification". The term "prehension" is derived from "apprehension", the prefix being elided to indicate that the term is used to denote uncognitive apprehension.[1] In the prehensive process the objective rather than the subjective, as with Berkeley, is the operative factor. The priority of the objective is thus in conformity with Whitehead's realistic position. In *Adventures of Ideas*[2] he explains the term thus: "I use the term 'prehension' for the general way in which the occurrence of experience can include, as part of its own essence, any other entity, whether another occasion of experience or an entity of another type. This term is devoid of suggestion either of consciousness or of representative perception. Feelings are the positive type of prehensions. In positive prehensions the 'datum' is preserved as part of the final complex object which 'satisfies' the process of self-formation and thereby completes the occasion."

As an alternative to the term "prehension" the word "event" may be used as meaning the thing prehended.[3] The realities of nature are the prehensions of nature, that is to say, the events in nature.[4] "The event is the unit of things real."[5] "An event is a matter of fact which by reason of its limitation is a value for itself; but by reason of its very nature it also requires the whole universe in order to be itself."[6]

The universe is, for Whitehead, a vibrating organism in

[1] *Process and Reality*, pp. 101–2. Cf. p. 134: "What the theory does is to edge cognitive mentality away from being the necessary substratum of the unity of experience. That unity is now placed in the unity of an event."

[2] p. 271.

[3] *Science and the Modern World*, p. 106.

[4] *Science and the Modern World*, p. 125.

[5] *Science and the Modern World*, p. 219.

[6] *Science and the Modern World*, p. 278.

process of evolution.[1] Change is a fundamental feature of this vibrating universe.[2] The very essence of real actuality is process.[3] The primary types of entities include eternal objects, for example a colour which comes and goes, but when it comes, it is the same colour[4]; actual entities including enduring objects, for example, a mountain which exhibits the principle of space from time: "Every enduring object is to be conceived as at rest in its own proper space."[5] Mind must also be regarded as a function of the organism.[6]

The stages in the evolving universe are four. "First and lowest, there are the actual occasions in so-called 'empty space'; secondly, there are the actual occasions which are moments in the life-histories of enduring non-living objects, such as electrons or other primitive organisms; thirdly, there are the actual occasions which are moments in the life-histories of enduring living objects; fourthly, there are the actual occasions which are moments in the life-histories of enduring objects with conscious knowledge."[7] As consciousness does not appear till the third or fourth stage, there are realms of experience uninfluenced by cognition, and by acknowledging the existence of such spheres Whitehead remains a realist. The idealist would nevertheless here interject that the stages before the dawn of consciousness are unknown and unknowable, have never been experienced, and are merely an extrapolation of Whitehead's thinking.

Kant had sundered experience into two spheres—the

[1] *Science and the Modern World*, p. 106: "Nature is a structure of evolving processes. The reality is the process"; p. 136: "The general aspect of nature is that of evolutionary expansiveness. These unities, which I call events, are the emergence into actuality of something."

[2] *Science and the Modern World*, p. 126.

[3] *Science and the Modern World*, p. 316.

[4] *Science and the Modern World*, p. 126.

[5] *Science and the Modern World*, p. 176. Cf. p. 278: "Endurance is the retention through time of an achievement of value. What endures is identity of pattern, self-inherited."

[6] *Science and the Modern World*, p. 278.

[7] *Process and Reality*, pp. 249–50.

natural or physical order constituted by the categories of the understanding, and the moral order characterised by the conception of duty; Whitehead seeks a more comprehensive principle which would account for both the mechanism of science and moral and aesthetic experiences. "My demand is that the ultimate arbitrariness of matter of fact from which our formulation starts should disclose the same general principles of reality, which we dimly discern as stretching away into regions beyond our explicit powers of discernment. Nature exhibits itself as exemplifying a philosophy of the evolution of organisms subject to determinate conditions. Examples of such conditions are the dimensions of space, the laws of nature, the determinate enduring entities, such as atoms and electrons, which amplify these laws. But the very nature of these entities, the very nature of their spatiality and temporality, should exhibit the arbitrariness of these conditions as the outcome of a wider evolution beyond nature itself, and within which nature is but a limited mode."[1]

In educational theory, as Adams points out,[2] "realism" has nothing to do with the scholastic controversies. "It is not opposed to nominalism or conceptualism. Nor is it directly concerned with the idealistic interpretation of experience. It confines itself to a very practical protest against mere verbalism in education." It has likewise almost nothing in common with the new realism, the significance of which for education is mainly negative. The new realism is a powerful weapon in attacking pragmatism.[3] By its insistence on the objectivity and universality of science it disposes of the anti-intellectualistic philosophies which claim that it is

[1] *Science and the Modern World*, p. 135.

[2] J. Adams, *The Evolution of Educational Theory* (London: Macmillan & Co., Ltd., 1912), pp. 234–5.

[3] An early example, although not from a man of science, is G. E. Moore's criticism (1907–8) of James's *Pragmatism*, later included in Moore's *Philosophical Studies* (1939), pp. 97–146.

only through an emotional postulate that contact with ultimate reality is established; it likewise disposes of the pragmatist's contention that truth can be attained only through the instrumentality of overt action.

The positive contribution of the new realism is its acceptance of the methods and results of the modern developments in physics; the new realists are accordingly not likely to succumb to the determinism which was the almost inevitable corollary of Newtonian mechanics. In so far as the modern physics, on which the new realism claims to be based, employs the experimental procedure, it is in agreement with Dewey's experimentalism. According to Breed,[1] the new realism opposes the pragmatists and the experimentalists by insisting on stability as against change. In so doing it is nevertheless only substituting one half-truth for another, for according to the principle of complementarity, expounded in the B.B.C. Reith Lectures for 1953, stability and change are compatible,[2] and this is Whitehead's position.

Like Dewey, Whitehead condemns[3] the overwhelming emphasis on past experience in our educational theory. The implicit assumption of a stable unchanging social system vitiates much of our thinking, he maintains. The significance for philosophy and education of the technological advances in the nineteenth century is common to Dewey and Whitehead.[4]

Whitehead protests against education merely combining a study of a few abstractions with a slighter study of a larger

[1] *Forty-first Yearbook of the National Society for the Study of Education*, p. 104.

[2] J. Robert Oppenheimer, *Science and the Common Understanding* (Oxford University Press, 1954). Cf. also A. N. Whitehead, *Twentieth Century Philosophy* (New York: The Philosophical Library, 1947): "Philosophy of Life", p. 133: "There is no Nature apart from transition and there is no transition apart from duration." Also *Modes of Thought*, p. 73: "The interweaving of change and permanence each required by the other. This interweaving is a primary fact of experience. It is at the base of our concepts of personal identity, of social identity, and of all sociological functionings."

[3] *Adventures of Ideas*, pp. 114, 115.

[4] *Science and the Modern World*, ch. vi.

number of abstractions.[1] Its object should be "immediate apprehension with the minimum of eviscerating analyses. The type of generality, which above all is wanted, is the appreciation of variety of value. I mean an aesthetic growth. . . .What is wanted is an appreciation of the infinite variety of vivid values achieved by an organism in its proper environment. When you understand all about the sun and all about the atmosphere and all about the rotation of the earth, you may still miss the radiance of the sunset. There is no substitute for the direct perception of the concrete achievement of a thing in its actuality. . . . But . . . art concerns more than sunsets. A factory, with its machinery, its community of operatives, its social service to the general population, its dependence upon organising and designing genius, its potentialities as a source of wealth to the holders of its stock, is an organism exhibiting a variety of vivid values. What we want to train is the habit of apprehending such an organism in its completeness."[2] But Whitehead's projects are more comprehensive than Dewey's or Kilpatrick's since they comprise intrinsic values the existence of which is not recognised by Dewey.[3]

The new realism has no monopoly of twentieth-century physics. Whitehead's statements[4] that the material universe is largely a concept of the imagination, and that the physical world is a deduced concept are analogous to Kant's contention in *The Critique of Pure Reason* (1781), that the phenomenal or scientific world is conditioned by the perceptual forms of space and time and by the categories of the understanding. The difficulty which modern physics

[1] *Science and the Modern World*, p. 285.
[2] *Science and the Modern World*, pp. 286–7.
[3] *Science and the Modern World*, p. 116: "The element of value, of being valuable, of having value, or being an end in itself, of being something which is for its own sake, must not be omitted in any account of an event as the most concrete actual something. 'Value' is the word I use for the intrinsic reality of an event. Value is an element which permeates through and through the poetic view of nature."
[4] *The Aims of Education*, pp. 199, 247.

has encountered in determining simultaneously the position and velocity of an electron[1] is paralleled by the objection urged against introspection in psychology that the observation of a mental process influences the process itself. Planck's quantum theory has a striking affinity to the Weber-Fechner law in psychology (1860), namely, that sensation varies arithmetically as the stimulus varies in geometrical ratio. Philosophy and psychology would in these respects seem to have anticipated modern physics.

Not only the advances in physics but likewise the advances in the biological, psychological and social sciences must be recognised in an adequate philosophy.

[1] Cf. M. Planck, *Philosophy of Physics*, translated by W. H. Johnston (London: George Allen & Unwin, Ltd., 1936), p. 63: "As a matter of fact every measurement, whatever the method of its employment, invariably interferes more or less with the event to be measured . . . the interference varying with the intensity of the illumination, and the illumination being essential for the measurement."

CHAPTER IV

Naturalism[1]

INSTEAD of employing the term "naturalism" as synonymous with materialism connoting the philosophy which interprets reality from the standpoint of physical science, it seems preferable to restrict the term to the doctrine which assumes that the biological categories are universally valid and are as applicable to conscious experience as to biological data. The biological standpoint is undoubtedly more comprehensive than the physical, but the issue arises whether it is adequate to account for all the diverse forms of reality. The alternative positions are represented by Bertrand Russell and A. N. Whitehead respectively. Russell declares that "man has developed out of the animals and there is no serious gap between him and the amoeba"[2], implying that the one principle of explanation is valid throughout; he repeats: "From the protozoa to man there is nowhere a very wide gap either in structure or in behaviour. From this fact it is a highly probable inference that there is also nowhere a very wide mental gap." Whitehead counters this argument by affirming[3]: "The distinction between men and animals is in one sense only a difference in degree. But the extent of the degree makes all the difference. The Rubicon has been crossed." And he elaborates: "But when all analogies between animal life and human nature have been stressed,

[1] J. S. Haldane, *The Philosophical Basis of Biology* (London: Hodder & Stoughton, Ltd., 1931); *The Philosophy of a Biologist* (Oxford University Press, 1935). H. S. Jennings, *The Biological Basis of Human Nature* (London: Faber & Faber, Ltd., 1930); *The Universe and Life* (New Haven: Yale University Press, 1933), and *Genetics* (London: Faber & Faber, Ltd., 1935).

[2] *The Analysis of Mind* (London: George Allen & Unwin, Ltd., 1921), pp. 40, 41.

[3] *Modes of Thought* (Cambridge University Press, 1938), pp. 38, 141.

there remains the vast gap in respect to the influence of reflective experience." A hundred years earlier the poet had anticipated the mathematician and refuted the naturalistic assumption:

> Know, man hath all which Nature hath, but more,
> And in that *more* lie all his hopes of good.[1]

The naturalists' hypothesis is that the only pathway to the understanding of reality is the biological. It rejects the materialistic conception of man as a machine, and substitutes for it man as a biological organism, the characteristics being the tendency of the organism to preserve its own integrity and to perpetuate the species. To discount the significance of the spiritual values generally admitted to be peculiar to man the naturalist denies this uniqueness and contends that premonitions or traces of these occur in animal life; he seeks a basis for all man's mental activities in features which are unequivocally characteristic of animal life, hence recourse to such concepts as instinct, evolution and recapitulation.

Just as "faculties" were originally multiplied to explain mental processes, instincts were later substituted to account for any activity—biological, psychological or social. A work on Instinct lists three hundred so-called instincts.[2] Definitions of instinct are about as varied and as numerous. The term was so extended by psychologists as to be almost unrecognisable by biologists, but even when thus enlarged certain mental activities remain beyond its orbit. A characteristic of instinct is that it is common to man and the animals. Religion has frequently been regarded as instinc-

[1] Matthew Arnold, "To An Independent Preacher who preached that we should be 'in harmony with nature' ". *The Poems of Matthew Arnold, 1840–67* (Oxford University Press, 1909), p. 60. Quoted by W. E. Le Gros Clark, "Reason and Fallacy in the Study of Fossil Man". Evening discourse at the British Association Meeting, 1954. *Advancement of Science*, xi, no. 43, p. 282.

[2] L. L. Bernard, *Instinct: A Study in Social Psychology* (London: George Allen & Unwin, Ltd., 1924).

tive, chiefly to conserve its universal nature, but even a naturalist would be hard pressed to attribute it to animals; much of the confusion has arisen from identifying "instinctive" with "innate". Instincts are hereditary but most human accomplishments are acquired, language being the outstanding instance. In "Dewey's Contribution to Educational Theory" Ernest C. Moore explains[1]: "The nearly complete helplessness of the young, though the most familiar of experiences, is the least observed of facts. We are born languageless, not knowing our right hand from our left, poison from food, or danger from safety. All the distinctions of things and qualities, together with the names we give them and the uses to which we put them, must be worked out after we get here. 'All that is human is learned,' says Professor Dewey." While instinct dominates life at the animal end of the evolutionary scale, plasticity or flexibility characterises the human end. Only an animal like man with exceptional powers of adaptability could survive in the modern rapidly changing physical environment, and only a being with imaginative insight could create, consolidate and transmit man's cultural heritage. Man's achievements in the arts and sciences are a flat contradiction to an instinctivist interpretation of human experience. The whole evolutionary process is in the direction of increasing the freedom of the organism; the animal has power of locomotion not available to plants, and man has an entrée to the world of imagination, of abstract ideas, denied to animals.

Even if we accept the mistaken and misleading notion of a combative instinct in primitive man,[2] instead of his innate peacefulness, it must be qualified by the fact, for which we have the authority of H. S. Jennings, that "no predictions

[1] *John Dewey: The Man and his Philosophy* (Harvard University Press, 1930), pp. 20–1.

[2] "There is not one instinct of combat. There are several sub-instincts of fighting." N. Tinbergen, *The Study of Instinct* (Oxford University Press, 1951), p. 113.

as to the possibility or impossibility of such proposals as the enforcement of prohibition or the suppression of war can be reliably predicted on the constancy of human nature; for with the same human nature diversities of the most radical character in customs and culture are compatible and have occurred."[1] Also, when an innate or instinctive trait like sex is common to man and the animals it is quite transformed in man by the human factor—imagination. It is consequently becoming customary in psychology and sociology to abandon the conception of instinct, in man. Even biologists find that they can expound the biological basis of human nature without recourse to instinct which is for them an oversimplified conception.[2] Biological inheritance is effected through the transmission of thousands of unit characters—genes; this complexity admits of possibilities undreamt of in the instinctivist doctrine of human nature, and has led a geneticist, of the standing of Jennings, to declare[3] that we shall never be able to predict the combination of characteristics that will come from the union of any two normal parents and that the literally inexhaustible variety of possibilities offered by nature realises for practical purposes the ideal of freedom of the will.

Terms like adaptation, maturation, etc., on which the naturalists rely, imply that the physical environment remains indifferent to changes initiated by the organism. Such isolation of the organism from its environment has created many misunderstandings as to man's nature and his place in the cosmos. Without stimulation by the environment potentialities would not develop into actualities, and

[1] *The Biological Basis of Human Nature*, p. 179.

[2] The only references to "instinct" in Jennings's *The Biological Basis of Human Nature* appear to be: pp. 295, 296: "Our instincts and education"; p. 344: "Colours, structures, 'instincts', reactions to particular agents—all acted in this way."

[3] *The Biological Basis of Human Nature*, p. 179.

without some response by the environment to the activities of the organism life would in many cases cease. "If it is true, as Professor Frisch has put it, that when we ask a question of nature, she will respond by being altered, by soever little, then nature and man share an unsuspected intimacy."[1]

Adaptation, in addition, implies the submission or subordination of the organism to its environment. Some animals nevertheless have the capacity of reconstructing their environment. In human education and learning adaptation would be a satisfactory conception only where the environment is an ideal one, or where the teacher has manipulated and prearranged the environment, but it is a misleading conception for life itself, for man's efforts consist mainly in modifying the material environment to suit his own purposes and in creating a cultural environment to sustain him in his upward progress. Progress is generally the result of conflict, not of adaptation. The "adaptation" view makes permanence, as did the Greeks and the East, the end of education, whereas progress is the dominating conception of modern times.[2]

The end of adaptation is equilibrium between the organism and its environment. Evolution—a concept on which the naturalist also relies to discount human initiative and originality and to dispose of the unique features in man's mental constitution, would appear to be in conflict with adaptation in so far as it presupposes a certain instability in the organic world. During the latter half of the nineteenth century it was confidently expected that evolution would solve all the riddles of the universe. Now the problem is to account for evolution itself.

[1] C. A. Coulson, "Science and Religion", Evening Discourse, British Medical Association Meeting at Oxford, 1954. *The Advancement of Science*, vol. xi, no. 43, p. 329.

[2] It is interesting to note that idealists generally, e.g. Kant, Fichte, propose to educate not for the present state of society but for a future better state.

There are three versions of evolution—organic, social and spiritual. The main difficulty is with the first—organic evolution. The controversy originated by Darwin's hypothesis raged around the issue whether the "evidences" were sufficient to justify the assumptions of organic evolution. The field of controversy has now shifted from geology to genetics, and the problem is to explain the mechanism of the mutations which selection presupposes, a mutation being a heritable variation. Mutations appear in plants, and new varieties may be produced naturally although generally they are the work of horticulturists. Variations likewise occur in animal organisms, but the problem is whether these are on the whole favourable. If they are the result of damage to the chromosomes and consequent dislocation to the genes, they may be unfavourable and cannot account for evolution. Another difficulty is whether a favourable variation can maintain itself with organisms in a wild state and become a mutation, or whether there would be reversion.

Whether modifications of an organism produced by the environments affect the genes and are inherited raises the Lamarckian issue. Jennings summarises the established facts as to the inheritance of acquired environmental characters in unicellular organisms thus[1]: "A changed environment induces a change in the genic materials that persists long after removal from the conditions that induced the change. And this altered genic material, as it assimilates, grows and multiplies, produces, not the original type of material, but the modified type. This continues for many generations." But Jennings is constrained to ask[2]: "Does the fact that environmental effects and reactions are inherited in protozoa, giving rise to adaptive and progressive inherited characteristics, suggest that we should eventually expect to find

[1] *The Biological Basis of Human Nature*, p. 134.
[2] *The Biological Basis of Human Nature*, p. 136.

this method of operation in the higher organisms?" And the reply he gives[1] can afford little comfort to the naturalist: "The overwhelming majority of the results are negative." The conclusion of the whole matter is: "Possibly a type of gene change that is in the nature of development rather than in that of disintegration and abnormality will eventually be detected. When this is demonstrated, genetic science appears to be left with the task that Osborn has called—The search for the Unknown Factor in Evolution."

Although biological evolution lends little or no support to the naturalistic philosophy, there is no question but that social evolution definitely negates it. The difference between the two interpretations of evolution is the difference between genetic and telic development, between a society impelled by hereditarian forces and a society self-directed towards the attainment of preconceived ends. The alternatives represent the complete inversion of the process, and we are led to ask: Is evolution a blind force and its results mere chance products or can man take a hand and redirect and control the process, thereby conferring on it a new significance?

If we are consistent evolutionists, we must conclude that the primeval matter contains the possibility of man's highest aspirations.[2] As J. S. Haldane concluded[3]: "The germs of all that we are at present familiar with on our planet, including the life and human personality, must also have been present in what, from the mere physical standpoint, we picture to ourselves as the relative chaos which then existed, but which, from a more adequate standpoint, was the evolving order of God's activity. The conception of evolution seems to me a vital part of religion, but evolution interpreted spiritually,

[1] *The Biological Basis of Human Nature*, p. 137.

[2] Cf. A. N. Whitehead, *Science and the Modern World* (Cambridge University Press, 1926), pp. 134–5: "A thoroughgoing evolutionary philosophy is inconsistent with materialism. The aboriginal stuff, or material, from which a materialistic philosophy starts is incapable of evolution."

[3] *Materialism* (London: Hodder & Stoughton, Ltd., 1932), p. 176.

as God's creative activity. In any other ultimate sense, evolution seems to me an essentially unphilosophical, as well as non-religious conception."

Eugenics would accelerate the evolutionary process by substituting conscious, for natural, selection.[1] It proposed to sterilise the unfit, but as there was some doubt as to who were the fit and who the unfit, and as the proposal was unlikely to meet with ready acceptance, this proposal was dropped.[2] Attention was then shifted to the question of differential fertility; the professional classes have the smallest families, and the presumably least capable eugenically the largest; a serious deterioration in the standard of fitness was accordingly predicted. To support this contention, the results of intelligence testing were adduced, the mean score of representatives of larger families having been found to be lower than that of representatives of smaller families.

The differential birth-rate on which the decline of national intelligence is based should, it has been indicated,[3] likewise have affected stature and weight of children, whereas measurements of these characteristics in various countries agree in confirming an increase. Although it confirmed the decrease in intelligence score with increasing size of family, without being able to account for it satisfactorily, the Scottish Mental Survey of 1947 repeat-

[1] Francis Galton, *Inquiries into Human Faculty and Its Development*. Introd.: "My general object has been to take note of the varied hereditary faculties of different men, and of great differences in different families and races, to learn how far history may have shown the practicability of supplementing inefficient human stock by better strains, and to consider whether it might not be our duty to do so by such efforts as may be reasonable, thus exerting ourselves to further the ends of evolution more rapidly and with less distress than if events were left to their own course."

[2] Cf. L. S. Penrose, *Biology of Mental Defect* (London: Sidgwick & Jackson, Ltd., 1949), p. 234: "Owing to the fact that the great majority of defectives of all grades are born to parents who cannot be classed as defective themselves, the reduction of defect in the community by preventing all known cases from having children would not be spectacular."

[3] L. S. Penrose, "The Supposed Trend of Declining Intelligence", *American Journal of Mental Deficiency*, July 1948, vol. liii, no. 1, pp. 114–18).

ing a test applied in 1932 revealed a slight improvement.[1]

The intelligence of a community or of various social classes in a community, like other psychological tendencies, is largely culturally conditioned. Anthropologists have confirmed the contention that much that is regarded as innate, for example, the collecting "instinct", is not present in the constitution of primitive peoples; it is apparently a function of culture. Evidence is likewise available in support of the cultural conditioning of intelligence. Primitive man is not bereft of intelligence although he would make a poor showing on the usual intelligence tests. Improvements in the economic, social and educational status of an area can raise the intellectual level of its inhabitants,[2] and "in contrast to other social philosophies, our democratic ideals depend upon the opportunities each child has for developing his individual abilities".

The pessimistic conclusion of the eugenists is but a corollary to the fatalistic attitude engendered in the early intelligence testers arising from the assumptions that intelligence tested innate ability unaffected by the child's upbringing and that the assessment remained constant throughout his life no matter what change of circumstance occurred. Intelligence cannot, however, be tested *in vacuo*; without environmental stimuli the innate bases of intelligence would not develop. Tested intelligence is a resultant of the interaction of genetic factors and environmental influences. The efforts now being made[3] to devise culture-

[1] *The Trend of Scottish Intelligence.* The Scottish Council for Research in Education, publication no. xxx, 1949.

[2] Lester R. Wheeler, "A Comparative Study of the Intelligence of East Tennessee Mountain Children," *Journal of Educational Psychology*, vol. xxxiii, no. 5, May 1942, pp. 321–4.

[3] e.g. by R. B. Cattell. See *The Fourth Mental Measurement Yearbook.* Ed. by O. K. Buros (New Jersey: The Gryphon Press, 1953), pp. 384–5. A. Davis and K. Eells, *Manual of Davis-Eells Test of General Intelligence or Problem Solving Ability* (The World Book Co., 1952; G. G. Harrap & Co., Ltd., 1954). Harold Geist, "Evaluation of Culture-Free Intelligence", *California Journal of Educational Research*, vol. v, no. 5, November, 1954.

free intelligence tests—a futile undertaking, is an admission that the original tests had not succeeded in eliminating cultural influences. The constancy of the IQ has likewise frequently been questioned.[1] Looking at the subject from a political rather than from a philosophical standpoint, Bagley complained[2] that the teachings of the determinist school were dangerous "because they proceed with an apparent disregard of the possibilities of ensuring progress through environmental agencies" and they "leave us with a negative philosophy of education—collection of statements regarding those things that the school simply cannot do".

Opposed to eugenics is euthenics—the science of the improvement of mankind through the provision of a more suitable environment. A century before the term "euthenics" was coined, Robert Owen was enunciating the principle[3] that any character, from the best to the worst, from the most ignorant to the most enlightened, may be given to any community, even to the world at large, by the application of proper means; which means are under the control of those who have influence in the affairs of men. Children, he explains,[4] can be trained to acquire any language, sentiments, belief, or any bodily habits and manners, not contrary to human nature. His principle was for long misunderstood, as it was falsely assumed that it applied to the individual, and that the individual's character could be fashioned quite irrespective of his hereditary endowment. But Owen in his formulation refers to "the community" and consistently qualifies his statements by introducing the

[1] "From testing over a period of three years it appears that . . . one child in four may vary as much as twenty points or more in IQ." Paul Witty, *Reading in Modern Education* (Boston: D. C. Heath & Co., 1949), p. 45.

[2] W. C. Bagley, *Determinism in Education* (Baltimore: Warwick & York, 1925), pp. 29, 39.

[3] Robert Owen, *A New View of Society; or, Essays on the Formation of Human Character*, fourth edition, 1818, p. 11.

[4] *A New View of Society*, p. 12, cf. p. 26; also G. D. H. Cole, *Robert Owen* (London: E. Benn, Ltd., 1925), p. 100.

term "collectively", thus affirming that the old collectively may train the young collectively to be ignorant and miserable, or to be intelligent and happy, and repeating that children collectively may be taught any sentiments and habits. So strenuously, indeed, did he contend for this view that his doctrine amounts almost to determinism, and doubtless on that account excited the suspicion and evoked the opposition of those who on theological grounds maintained the freedom of the will.

Eugenics cannot compare with education in regard to the rate of social improvement. Ideas are not inherited but acquired, and herein lies the educator's opportunity. The progress and improvement of a race can be more rapidly and more effectively influenced by ideas, by the creation of a right public sentiment than by any biological devices. When eugenics is in a position to return unequivocal answers to its questions, it will have to invoke the aid of education for their dissemination and general acceptance. Eugenics and education are complementary, as Plato clearly realised and definitely stated in the *Republic*[1]: "And indeed, if a state has once started well, it exhibits a kind of circular progress in its growth. Adherence to a good system of nurture and education creates good natures, and good natures, receiving the assistance of a good education, grow still better than they were, their breeding qualities improving among the rest, as is also seen in the lower animals."

As a principle of development the concept of evolution had displaced the doctrine of recapitulation[2] of which very different schools of philosophic thought have made repeated use. Aristotle recognised the principle, but its idealistic form

[1] § 424.

[2] For history of the law of biogenesis or parallelism of ontogenesis and phylogenesis, see J. T. Merz, *European Thought in the Nineteenth Century* (Edinburgh and London: Wm. Blackwood & Sons, Ltd., 1903), vol. ii, pp. 348–50. Especially footnote.

Recapitulation had in turn displaced the cyclical view of development—all change is periodic and recurrent. See Merz, vol. ii, p. 286.

finds its noblest expression in the words of Hegel. "The past", he writes,[1] "is traversed by the individual in the same way as one who begins to study a more advanced science repeats the preliminary lessons with which he had long been acquainted, in order to bring their information once more before his mind. He recalls them, but his interest and study are devoted to other things. In the same way the individual must go through all that is contained in the growth of the universal mind, but all the while he feels that they are forms of which the mind has divested itself, that they are steps on a road which has been long ago completed and levelled. Thus points of learning which in former times taxed the mature intellects of men are now reduced to the level of exercises, lessons and even games of boyhood, and in the progress of the schoolroom we may recognise the course of the education of the world, drawn, as it were, in shadowy outline." Froebel more succinctly states: "In the development of the inner life of the individual man the history of the spiritual development of the race is repeated."[2] The Herbartians exploited the principle and fashioned their curricula in accordance with it. Both Dewey and Montessori accepted it in their earliest works but rejected it later. Naturalism derives a certain measure of support from recapitulation, Spencer affirming[3]: "The education of the child must accord both in mode and arrangement with the education of mankind considered historically. In other words, the genesis of knowledge in the individual must follow the same course as the genesis of knowledge in the race." Nunn[4] claimed that recapitu-

[1] *Phenomenologie des Geistes*, translated by W. Wallace, *Prolegomena to the Study of Hegel's Philosophy* (Oxford Press, 1894, second edition), p. 279.

[2] *The Education of Man*, translated by W. N. Hailmann (New York: D. Appleton & Co., 1909), p. 160.

[3] H. Spencer, *Education: Intellectual, Moral and Physical*, p. 90.

[4] T. P. Nunn, *Education: Its Data and First Principles* (London: Edward Arnold, 1920), p. 39. In the third edition, 1945, he says (p. 46): "It is not without some validity as an educational principle," and on p. 77: "if there is any validity in the recapitulation theory".

lation had "considerable validity as an educational principle".

The recapitulation theory originated, and found confirmation, in embryology, and interesting parallels can be adduced between the behaviour of primitive man and that of the modern child, but objections to it have been urged on theoretical grounds and serious difficulties attend its practical applications. Although advanced mainly on biological grounds, the theory conflicts with the generally accepted view of biologists regarding the inheritance of acquired characteristics. The transference from the biological to the psychological domain also needs substantiation. Dismissing the recapitulation theory, Koffka urges[1] instead "the collection of as many facts as possible which may prove helpful in tracing the correspondence between individual and racial development. This means that one should constantly endeavour to support, to control, and to supplement the results of one branch of developmental investigation with results obtained in another branch, as, for instance, by comparing child psychology with folk psychology; but one should never allow oneself to be led into the dogmatic construction of uniformities and dependencies."

The "unconscious" mind is assumed by certain psychopathologists to be inherited through recapitulation. Thus Jung[2] speaks of "the wisdom of the experience of untold ages, deposited in the course of time and lying potential in the human brain". But such recapitulation has been characterised as "an unwarranted accretion to the Freudian theory",[3] and another writer adds[4]: "The psycho-analysts seem to have perpetrated an error in regard to inheritance

[1] K. Koffka, *The Growth of the Mind* (London: Kegan Paul, 1924), pp. 48–9.

[2] *Collected Papers on Analytic Psychology* (London: Baillière, Tindall & Cox), 1917), p. 442.

[3] Ian D. Suttie, *The British Journal of Medical Psychology*, vol. v, 1925, pp. 83–91.

[4] L. F. Shaffer, *The Psychology of Adjustments* (London: G. G. Harrap & Co., 1936), p. 423.

that was once prevalent among other psychologists, the fallacy of ascribing other unaccountable traits to native endowment. In so doing extreme psycho-analysts have placed in the infant's 'unconscious' a knowledge of folk-lore, of primitive religions and of archaic symbolism that an anthropologist might envy."

Dewey[1] might claim that experience in a child guidance clinic where the treatment of the problem child is seldom complete without the attendance of one or both parents, confirms him in maintaining that the most harmful and undesirable emotional attitudes of children, especially fears, inferiorities, etc., are due mainly to social conditioning. We can go further and insist that the psycho-analyst must posit a moral order, otherwise there would be no conflict and no complexes and he would find himself with his occupation gone—Saul is also among the prophets. What we most object to is the attitude that attributes the cause of all our perplexities—neuroses, etc., to our ancestors, thereby absolving us from all responsibility; we have reason to congratulate ourselves and regard ourselves as virtuous in so far as we suppress inherited tendencies, and—if we fail—or do not even attempt to suppress these, we deserve the sympathy, not the censure, of society. "Character", it has been said,[2] "is from the point of view of the psycho-analyst a sort of abnormality."

The principle of recapitulation or the doctrine of the parallelism of racial and individual development has been applied to the planning of the curriculum. Apart from the difficulty of "turning the accomplishment of many years into an hour glass"[3] which challenged Shakespeare, the Herbartians were forced to recognise the irregularity of human development and to select only the outstanding

[1] John Dewey, *Sources of a Science of Education* (New York: H. Liveright, 1929), pp. 55–60.
[2] S. Ferenczi, *The British Journal of Medical Psychology* ,vol. viii, p. 5.
[3] *Henry V.*

achievements; their scheme thereby took the form of the culture-epoch doctrine—the points of correspondence between the culture-epochs and the stages of the child's development being fixed arbitrarily. In his early days Dewey applied the principle practically or technologically and his curriculum followed in outline the evolution of occupations in the United States. The Herbartian and the Dewey schemes are complementary and would require to be amalgamated if the requirements of recapitulation were to be satisfied. The weakness of the theory is its dependence on the past, whereas, according to Dewey,[1] "the business of education is rather to liberate the young from reviving and retraversing the past than to lead them to a recapitulation of it".

Ernest Jones has complicated matters still further by formulating a double recapitulation[2]: "The individual recapitulates and expands in the second decennium of life the development he passed through during the first five years of life, just as he recapitulates during these first five years the experiences of thousands of years in his ancestry, and during the prenatal period those of millions of years."

An emphasis on individuality results from the adoption of the biological standpoint in philosophy and education. Biology assumes the complete integrity of the organism. The exclusiveness that characterises the physical organism is assumed to characterise human personality. Writing avowedly from the biological standpoint, Nunn[3] admits that his aim is to reassert the claim of individuality to be regarded as the supreme educational aim. "The proper goal of human life is perfection of the individual and all the machinery of society and all the traditions of human

[1] John Dewey, *Democracy and Education* (New York: The Macmillan Co., 1916), p. 85.

[2] "Some Problems of Adolescence", *The British Journal of Psychology*, vol. xiii, July 1922, p. 40.

[3] T. P. Nunn, *Education: Its Data and First Principles*, p. 19: "The criterion of educational effort laid down provisionally . . . is justified by a sound reading of biological facts."

achievement and culture are to be valued only in so far as they conduce towards that perfection."[1]

The conception of the autonomous development of the individual as the central aim of education is liable to misinterpretation and may even be thought to justify mere self-assertion, thus approximating dangerously the ethics of Nietzsche in which the efficient individual acknowledges no authority but his own will and no morality but his own interests. Insistence on development of individuality may lead to mere self-assertion and result in a state of affairs, such as Herbart described, in which each person brags of his own individuality and nobody understands his neighbour.[2] The complementary error is apparent in the position which makes the enrichment of the life of the nation, or of humanity, the aim of education. Fichte's statement,[3] if taken apart from its context, expresses this error in exaggerated fashion: "There is but one virtue—to forget one's own personality; and but one vice—to make self the object of our thoughts." Undue emphasis on social values results in conformity—no person has a soul he can call his own, and morality degenerates into "what the neighbours think".

The dualism of individual and social interests can only be transcended by the recognition of universal values in man. Valid thinking is universal; we have thus to train pupils not only to think for themselves but to think like other people. It is only the animals that think for themselves. And as Aldous Huxley adds[4]: "All the familiar deadly sins are products of separate emotions. Anger, envy, fear—these insist on the various aspects of our animal separateness from one another." And he affirms[5]: "Per-

[1] *The New Era*, vol. x, October 1929, no. 40, pp. 206–7.
[2] *Allgemeine Pädagogik*, bk. ii, ch. iv, p. 1 (English translation, p. 142).
[3] *The Popular Works of J. G. Fichte*, translated by W. Smith (London: John Chapman, 1899), vol. ii, "Characteristics of the Present Age", p. 33.
[4] *Ends and Means* (London: Chatto & Windus, 1937), p. 318.
[5] *Ends and Means*, p. 324.

sonality is not an absolutely independent existent; persons are interdependent parts of a greater whole." The social state of man is a consequence of his universal nature[1] and the latter is also the basis of democracy.[2]

The ethics of a system is the most convenient touchstone whereby to decide whether or not a writer is "naturalistic" in the technical sense. For the naturalist, as opposed to the idealist, conduct is controlled by impulse or instinct or by the experiences acquired through the reaction of environment on the physical endowment of the individual without the intervention of such factors as will and conscience. The ethical doctrine typical of this position is hedonism which Herbert Spencer in his chapter on "Moral Education" formulates thus[3]: "From whatever assumption they start, all theories of morality agree that conduct whose total results, immediate or remote, are beneficial, is good conduct; while conduct whose total results, immediate or remote, are injurious is bad conduct. The ultimate standards by which all men judge of behaviour, are the resulting happiness or misery." According to this doctrine there is no moral law, no place for duty for duty's sake: self-sacrifice would be utter foolishness; one's own selfish satisfaction the greatest good.

Evidently in complete ignorance that he had been anticipated by Rousseau,[4] Spencer, to attain his aim, pro-

[1] Cf. B. Bosanquet, *Logic* (Oxford University Press, 1911), vol. i, p. 43.

[2] Cf. Kant's formulations of the moral law: (1) Act always on such a maxim as thou canst at the same time will to be a universal law; (2) Act on maxims which can at the same time have for their object themselves as universal laws of nature; (3) So act in regard to every rational being (thyself and other) that he may have place in thy maxim as an end in himself.

[3] This chapter appeared first in April 1858 in *The British Quarterly Review* under the title "The Moral Discipline of Children," and purported to review Locke's *Some Thoughts on Education* (1710), a translation of Jean Paul, Fr. Richter's *Levana: or the Doctrine of Education* (1848) and *The Quarterly Journal of Education*, 1831 to 1835.

[4] Cf. G. Compayre, *Herbart and Education by Instruction* (London: G. G. Harrap & Co., 1908), p. 88, note: "Mr. Herbert Spencer in writing to me has stated that before composing his remarkable essay he had neither read the *Émile* of Rousseau

pounds the discipline by natural consequences. For Rousseau dependence on things, with the consequent discipline by natural consequences, was restricted to the early stages in the training of Émile; Émile was to receive direct moral and social training when he reached adolescence. For Spencer, on the other hand, the discipline by natural consequences was assumed to provide a complete moral training. His justification of the doctrine runs thus: "When a child falls, or runs its head against the table, it suffers a pain, the remembrance of which tends to make it more careful; and by repetition of such experiences, it is eventually disciplined into proper guidance of its movements." "Now in these cases Nature illustrates to us in the simplest way the true theory and practice of moral discipline." He concludes that it is the peculiarity of these penalties that they are simply the unavoidable consequences of the deeds which they follow; they are nothing more than the inevitable reactions entailed by the child's actions; they are proportionate to the transgressions; and they are also constant, direct, unhesitating, and not to be escaped.

Spencer has nevertheless to admit that his principle does not apply without exception and that during infancy a considerable amount of absolution is necessary, thus a three-year-old urchin playing with an open razor cannot be allowed to learn by this discipline of consequences, for the consequences may be too serious. John Stuart Mill, in his work *On Liberty*,[1] has illustrated the weakness of Spencer's argument in later life: "If either a public officer or anyone else saw a person attempting to cross a bridge which had been ascertained to be unsafe, and there was no time to warn

nor any work on education except a bad commentary by the Englishman Biber on Pestalozzi." Rousseau's *Émile*, Everyman translation, states (p. 65): "Let his unreasonable wishes meet with physical obstacles only or with the punishment which results from his own actions, lessons which will be recalled when the same circumstances occur again." "Children should never receive punishment as such; it should always come as the natural consequence of their fault."

[1] Chapter v, "Applications".

him of his danger, they might seize him and turn him back, without any infringement of his liberty; for liberty is doing what one desires, and he does not desire to fall into the river." Dewey[1] generalises the position thus: "If a person cannot foresee the consequences of his act, and is not capable of understanding what he is told about its outcome by those with more experience it is impossible for him to guide his act intelligently. . . . In some cases it is well to permit him to experiment and to discover the consequences for himself in order that he may act intelligently next time under similar circumstances. But some courses of action are too discommoding and obnoxious to others to allow of this course being pursued. Direct disapproval is now resorted to. Shaming, ridicule, disfavour, rebuke, and punishment are used. Or, contrary tendencies in the child are appealed to to divert him from his troublesome line of behaviour."

Kant[2] recognises that though punishment is a physical evil which ought to be connected with moral evil as a natural consequence, it is not actually so connected. In nature there are no punishments, only consequences. As Matthew Arnold put it[3]:

Streams will not curb their pride
The just man not to entomb,
Nor lightnings turn aside
To leave his virtues room;
Nor is that wind less rough that blows a good man's barge.

Although T. H. Huxley is a naturalist in philosophy,[4] he

[1] *Democracy and Education*, pp. 32–3.

[2] Kant's *Critique of Practical Reason, and Other Works on the Theory of Ethics*, translated by T. K. Abbott (London: Longmans, Green & Co., 1883), p. 127.

[3] "Empedocles on Etna", ll. 252–6.

[4] 1825–95. *Lay Sermons, Addresses, Reviews* (Macmillan & Co., 1870), pp. 134–5: "No very abstruse argumentation is needed, in the first place, to prove that the powers, or faculties, of all kinds of living matter, diverse as they may be in degree, are substantially similar in kind. . . . In physiological language this means

realises that nature cannot serve as a pattern for the moral training of the child, for nature's punishments are not proportionate to the transgressions, as Spencer averred. "Nature is harsh and wasteful in its operations. Ignorance is vitiated as sharply as wilful disobedience—incapacity meets the same punishment as crime. Nature's discipline is not even a word and a blow, and the blow first; but the blow without the word. It is left to you to find out why your ears are boxed."[1] Huxley inverts Rousseau's order—the natural followed by the moral and social, by making the moral education a preparation for the natural. "The object of what we commonly call education—that education in which man intervenes and which I shall distinguish as artificial education—is to make good these defects in nature's methods; to prepare the child to receive nature's education, neither incapably nor ignorantly, nor with wilful disobedience; and to understand the preliminary symptoms of her displeasure, without waiting for the box on the ear. In short, all artificial education ought to be an anticipation of natural education."[2]

The defect of the doctrine as a whole is that it is mainly negative, prohibitive. It would never lead to disinterested actions, to noble deeds done for their own sake. Its highest virtue would be a selfish prudence. Any action would be justified if one could evade the consequences, or, in popular parlance, "get away with it". The social consequences of wrong actions are ignored. While animals learn by the discipline of natural consequences, a child's education must be more than the mere force of circumstances; there should

that all the multifarious and complicated activities of man are comprehensible under three categories. Either they are immediately directed towards the maintenance and development of the body, or they effect transitory changes in the relative positions of the body, or they tend towards the continuance of the species. Even these manifestations of intellect, of feeling, and of will, which we name the higher faculties, are not excluded from this classification."

[1] *Lay Sermons, Addresses, Reviews*, p. 38.

[2] *Lay Sermons, Addresses, Reviews*, p. 39.

be placed at his disposal something of the wisdom of the ages. All that nature can teach man in regard to punishment is impartiality and consistency in application, for man's punishments by contrast are apt to be capricious and vacillating. The doctrine might be justified on the ground that it enables the child to escape the dangers of repression resulting from adult domination, but this can be effected less drastically by other means.

All the inconsistencies of naturalism result from the denial that with the emergence of man in the evolutionary scale unique characteristics appear, that the transition from mere life to conscious experience demands explanation on a higher plane. As self-maintenance and perpetuation of the species distinguish the organic from inorganic, so conscious as opposed to animal behaviour exhibits imaginative foresight. While in memory itself retention is a property of plant life—"as the twig is bent, the tree's inclined", and recognition a property of animals, recall is peculiar to man. Accordingly, as Spearman says[1]: "Psychology is no mere flower of biology but one of its greatest roots." The unique equipment of the human species has been thus evaluated by the President of the Royal Society—Professor E. D. Adrian, in his Presidential Address to the British Association, 1954: "But human beings, when we consider them as material for the biologist, are not to be thought of as incapable of improvement. Other kinds of animal have been found to possess unexpected power of communicating with one another, but we are the one kind endowed with a brain which gives us the power of communicating by putting our impressions into words and appreciating the meaning of the words we hear. Speech would be little use to us unless we could remember what is meant, but memory, the ability to learn, is a property of the simplest kinds of nervous

[1] C. Spearman, *The Nature of Intelligence* (London: Macmillan & Co., Ltd., 1927), p. 27.

system. We alone possess a nervous system which gives us the power to order our ideas in words. We alone have this way of thought which allows us to compare a new problem with an old one." This unique equipment of man leads Jennings to issue the warning to teachers that the things that are of most importance about children must be known from a study of children rather than from a study of other organisms.[1]

In education,[2] as Adams says, the term "naturalism" is very loosely applied; it is used to characterise the reaction from conventionalism and artificiality, Rousseau's *Back to nature* being cited in this connection.[3] It is this interpretation that Adams and Dewey support.[4]

Naturalism in education is rather coincident with the introduction of the scientific conception in education, and Herbert Spencer's work *On Education: Intellectual, Moral and Physical* might be said to signalise the origin of the doctrine in its modern sense. As we might infer, Spencer was a pronounced individualist. "Society is made up of individuals; all that is done in society is done by the combined action of individuals; and therefore in individual actions only can be found the solutions of social phenomena."[5] The function of the state was merely to keep the ring clear to enable the struggle for existence to proceed uninterruptedly.

[1] *Suggestions of Modern Science Concerning Education*—"The Biology of Children in Relation to Education" (New York: The Macmillan Co., 1925), p. 6. Cf. "No animals, not even crocodiles, shed tears." R. S. Illingworth, "Crying in Infants and Children", *British Medical Journal*, no. 4905, 8th January, 1955, p. 75.

[2] J. Adams, *The Evolution of Educational Theory* (London: Macmillan & Co., Ltd., 1912), ch. ix.

Herbert Spencer, *Education: Intellectual, Moral and Physical.*

J. Frank Dame, *Naturalism in Education—Its Meaning and Influence* (Temple University, 1938).

Glenn Johnson, *Some Ethical Implications of a Naturalistic Philosophy of Education* (New York: Bureau of Publications, Teachers' College, Columbia University. Contributions to Education, no. 930, 1947). p. 251.

[3] For different meanings assigned to the term "nature" by Rousseau, see the writer's *Doctrines of the Great Educators* (London: Macmillan & Co., Ltd., 1954).

[4] *Evolution of Educational Theory*, ch. ix.; *Democracy and Education*, ch. ix.

[5] *Education: Intellectual, Moral and Physical*, p. 44.

The state existed to secure the interests and protect the liberties of the individual; the individual had no duties to the state. Like all individualists in political philosophy he failed to recognise that state enterprise might render possible an expansion rather than a restriction of the individual's powers.

If Spencer's political theory was individualistic, his general philosophic position was naturalistic. Even before the publication of Darwin's *The Origin of Species* in 1859 he entertained the idea of an evolutionary process, development in his phrase proceeding from "an integration of matter and concomitant dissipation of motion, during which the matter passes from an indefinite incoherent homogeneity to a definite coherent heterogeneity". Accepting the Lamarckian doctrine of the transmission of acquired characteristics, he tended to be an environmentalist—like most radical reformers of his times, rather than an hereditarian in education. In *The Man versus the State*[1] he accordingly affirms: "There is the indisputable fact that each human being is in a certain degree modifiable, both physically and mentally. Every theory of education, every discipline, from that of the arithmetician to that of the prize-fighter, every proposed reward for virtue or punishment for vice, implies the belief, embodied in sundry proverbs, that the use or disuse of each faculty, bodily or mental, is followed by an adaptive change in it—loss of power or gain of power, according to demand." But he does not agree that education can accomplish everything; evidently with Robert Owen in mind he comments[2] that the notion that an ideal humanity might be forthwith produced by a perfect system of education is not acceptable to such as have dispassionately studied human affairs.

In his work on *Education*: *Intellectual, Moral and Physical* Spencer first attacked the established curriculum and then asserted a claim for the recognition of science in the

[1] 1885. [2] *Education: Intellectual, Moral and Physical*, p. 129.

educational curriculum comparable to the importance it had acquired in the industrial life of Britain. Spencer's criterion for an efficient education is its value for human welfare, a principle that no one would challenge. He believes, like Dewey, in placing essentials first, and refinements second. He recognises that the problem of the curriculum is not whether such and such a subject is valuable, but what is its *relative* value. Earlier educators were not apparently faced with the difficulty which confronted Spencer. Comenius's aim was to teach all things to all men, no selection being deemed necessary. Locke, in *Some Thoughts Concerning Education*,[1] was, however, conscious of the problem: "And since it cannot be hoped he should have time and strength to learn all things, most pains should be taken about that which is most necessary, and that principally looked after which will be of most and frequent use to him in the world." Spencer would substitute "importance" for "frequency": "Our first step must obviously be to classify in the order of their importance the leading kinds of activity which constitute human life," but in justifying the very subordinate place he assigns to the arts in his curriculum he availed himself of the frequency criterion.[2] When he applies his criterion for judging the relative value of studies, Spencer's naturalistic bias asserts itself, and he assigns priority to the activities which directly minister to self-preservation, and to the activities which, by securing the necessaries of life, indirectly minister to self-preservation. His individualistic bias induces him to relegate only to fourth place those activities which are involved in the maintenance of proper social and political relations.

Spencer recognises that nature herself provides for the most part for self-preservation, and all that education need concern itself with is that there shall be no thwarting of nature. This danger can be avoided by instructing pupils in

[1] § 94. [2] *In Education: Intellectual, Moral and Physical*, p. 47.

the laws of life and the principles of physiology. Men are mainly engaged in the production, preparation and distribution of commodities, and efficiency in these activities depends, according to Spencer, "on an adequate acquaintance with their physical, chemical and vital properties, as the case may be; that is, it depends on science". He also claims that not only for intellectual discipline is science best but also for moral discipline, but he somewhat overstates his case by adding that the discipline of science is superior to our ordinary education because of the religious culture that it gives. What Spencer was projecting was the correlation of all studies round science just as the Herbartians had earlier attempted round history. He was arguing that a curriculum centred on science would provide a liberal education just as earlier educators had believed that classics could serve or as some present-day educators hope that a technological training will.

Although a naturalist, T. H. Huxley, in his chapter on "Scientific Education",[1] sought to do justice to the cultural aspects of life: "There are other forms of culture beside physical science, and I should be profoundly sorry to see the fact forgotten, or even to observe a tendency to starve, or cripple, literary, or aesthetic, culture, for the sake of science. Such a narrow view of the nature of education has nothing to do with my firm conviction that a complete and thorough scientific culture ought to be introduced into all schools." His aim of education he thus expresses[2]: "That man, I think, has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold logic engine, with all its parts of equal strength and in smooth running order; ready, like a steam engine, to be turned to any kind

[1] *Lay Sermons, Addresses, Reviews*, p. 67.
[2] *Lay Sermons, Addresses, Reviews*, p. 39.

of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty whether of nature or of art, to hate all vileness, and to respect others as himself. Such an one and no other, I conceive, has had a liberal education; for he is, as completely as a man can be, in harmony with nature. He will make the best of her, and she of him. They will get on together rarely, she as his ever beneficent mother, he as her mouthpiece, her conscious self, her minister and interpreter."

Nunn, in his *Education: Its Data and First Principles*,[1] regards it as "profitable to seek help from the 'biological view' of human life". Not only, however, does Nunn derive help from, but he has also allowed himself to be dominated by biological conceptions; for this reason he may be regarded as a naturalist in philosophy. Not recognising any change of gear in passing from animal to conscious life the naturalist regards cultural facts and values as belonging to the same order as the biological. This is precisely the standpoint of Nunn. "It seems clear, then," he says,[2] "that whatever explanation we give of the broad facts of life must apply, in principle, equally to body and mind." The same idea he expresses in more literary form[3]: "In short, stupendous as the distance is between the lives of the protozoa and the creature who has been made a little lower than the angels, it consists—like the differences between a village church and a cathedral—not in any radical unlikeness of the essential features, but rather in the differing richness, variety and subtlety of the details in which a

[1] Third edition, p. 169. [2] *Education: its Data and First Principles*, p. 20.
[3] *Education: its Data and First Principles*, p. 24.

single scheme has been worked out at different evolutionary levels." When he applies this principle to the mental processes he is led to assert[1]: "There is no difference in principle between intelligent behaviour on the perceptual level and the abstract reasoning of which only men are capable." Art is reduced to a form of play, and, as this might be thought to disparage the artist's efforts, Nunn proffers the apology[2]: "This affiliation of art to play is far from implying a mean estimate of the artist's labours." Nunn, while not inaptly describing the religious attitude,[3] refrains from attempting to disclose the biological basis of religion. "The essential marks of the religious spirit are the recognition that there are objects of supreme and universal worth which rightly claim our reverence and service, together with a sense that, though in our weakness and unworthiness we must ever be their 'unprofitable servants', yet to deny their claims or to fail in loyalty to them is shameful and dishonouring." But his retreat into the social origins of religion is what we should expect from Dewey rather than from Nunn.

Nunn seeks to escape the consequences and limitations imposed on him by the assumption of the naturalist's standpoint by attributing to all forms of life what is unique in man and in the divine, namely, creative capacity. Thus he equates it to "adaptation", "growth", and all forms of psychical activity.[4] In his British Association Address it is stated in a somewhat extreme form[5]: "It is the idea developed with whimsical seriousness by Samuel Butler, namely, that

[1] *Education: its Data and First Principles*, pp. 234–5. The "only" gives his case away completely.

[2] *Education: its Data and First Principles*, p. 88. Art is really an expression of reality. As Herbert Read says in *Education Through Art* (London: Faber & Faber, Ltd., 1943), p. 11: "Art is the representation, science the explanation—of the same reality." Cf. pp. 109–10.

[3] *Education: its Data and First Principles*, p. 265.

[4] *Education: its Data and First Principles*, pp. 29, 32.

[5] Report of the British Association, 1923, p. 265.

the variations and mutations which in one form or another every theory of evolution postulates, are in essence acts of creation homologous with human inventions and works of art—that if, for example, we compare the emergence or modification of an animal organ, say, with the creation of Hamlet or the invention of the petrol-engine, the differences between the two things, vast as they may be, have yet less significance than the fundamental resemblances." It is nevertheless the priority of the spiritual and cultural values, in spite of his naturalistic tendencies, that has won for Nunn's educational doctrine its general acceptance in England; of these he says: "They must be at least of equal significance with anything else in man's life, and may not unreasonably be held to contain the clue to life's whole meaning."[1] Here he is not far from the kingdom.

An attempt has been made to rehabilitate the naturalistic philosophy in education by Glenn Johnson in *Some Implications of a Naturalistic Philosophy of Education*,[2] but the "Reconstruction Within Naturalism" which he proposes is nothing but the importing into naturalism of Dewey's instrumentalism or experimentalism. He designates his version "experimental naturalism",[3] and its distinguishing characteristic[4] is "the primacy of method". Everything is "operational", as Dewey would say; but it operates without any end in view, as Bertrand Russell, in his chapter on Dewey in *History of Western Philosophy*, reveals when dealing with the intellectual aspect of experience. The difficulties which naturalism encounters in finding adequate sanctions for morality is met by resort to the social criterion. The criterion of value is the social consequences,[5] social approval,[6] widespread partici-

[1] British Association Address, p. 267.
[2] Bureau of Publications, Teachers' College, Columbia University, 1947.
[3] *Some Implications of a Naturalistic Philosophy of Education*, p. 87.
[4] *Some Implications of a Naturalistic Philosophy of Education*, p. 93.
[5] *Some Implications of a Naturalistic Philosophy of Education*, p. 167.
[6] *Some Implications of a Naturalistic Philosophy of Education*, p. 101.

pation,[1] and man is "the product of the interplay of social forces".[2] But as Bertrand Russell writes[3]: "It should be observed that the view which substitutes the consensus of opinion for an objective standard has certain consequences which few would accept. What are we to say of scientific innovators like Galileo who advocate an opinion with which few agree, but finally win the support of almost everybody. . . . This implies a criterion other than the general opinion. In ethical matters there is something analogous in the case of the great religious teachers. . . . Such ethical innovations obviously imply some standard other than majority opinion."

[1] *Some Implications of a Naturalistic Philosophy of Education*, p. 88.
[2] *Some Implications of a Naturalistic Philosophy of Education*, p. 94.
[3] *History of Western Philosophy* (London: Allen & Unwin, Ltd., 1946), p. 139.

CHAPTER V

Pragmatism in Education

THE Greeks discussed the question of the relative values of the speculative and the practical lives, and Aristotle had not the slightest hesitation in awarding the superiority to the life of contemplation on the ground that speculative activity alone is prized for its own sake. The modern pragmatist inverts the Greek conclusion, and with as little hesitation as Aristotle, contends that the true is the name of whatever proves to be good, that is, truth is merely an expedient for the attainment of practical purposes; the pragmatist thus subordinates speculative to practical activity.

The pragmatic attitude is modern and typically English or Anglo-Saxon. The germ of the utilitarian or pragmatic spirit is to be traced to Bacon's claim that knowledge was to be sought for the glory of the Creator and the relief of man's estate; his aim was to establish a trustworthy system whereby nature might be interpreted and brought into the service of man.[1] Locke, in *An Essay Concerning Human Understanding* (1690), adopts what is practically the pragmatic standpoint; in Book I he affirms "we shall not have much reason to complain of the narrowness of our minds, if we will but employ them about what may be of use to us", and in the Introduction, "our business is not to know all things, but those which concern our conduct". Fraser, in a footnote, commenting on this latter statement,

[1] Bacon (1561–1626) nevertheless recognised the limitations of the pragmatical position. Cf. *The Philosophical Works of Francis Bacon* (London: George Routledge & Sons, Ltd., 1905), pp. 76, 155. In the latter passage he refers to "pragmatical men". The Oxford Dictionary's first reference to "pragmatic" is 1643, and to "pragmatism" 1863.

remarks[1] that this might be the motto of the *Essay*, and the watchword of English philosophy which characteristically seeks to keep in direct relation to life and conduct. In his *Fundamental Principles of the Metaphysics of Ethics*[2] Kant explains thus what he regards as the proper significance of the term "pragmatic": "For sanctions are called pragmatic which flow properly not from the law of states as necessary enactments, but from precaution for the general welfare. A history is composed pragmatically when it teaches *prudence*, i.e., instructs the world how it can provide for its interests better, or at least as well, as the men of former times."

The originator of pragmatism, as popularised by William James,[3] was Charles Sanders Peirce,[4] but Peirce was forced to disown James's misunderstanding of his views, and, to distinguish his own version, had even to invent the modification pragmaticism "ugly enough to be safe from kidnappers", as he explained.[5]

Descartes (1596–1650), inaugurating modern philosophy, decided to discard all traditional beliefs, and, relying on his own reason, to accept as true only such ideas or connections between ideas as could be clearly and distinctly perceived. Peirce objected that there was a prior question which

[1] A. C. Fraser, *An Essay Concerning Human Understanding by John Locke* (Oxford University Press, 1894), vol. i, p. 31.

[2] Translated by T. K. Abbott (London: Longmans, Green & Co., 1895), p. 40, note.

[3] 1842–1910. Cf. *The Will to Believe and Other Essays on Popular Philosophy* (New York and London: Longmans, Green & Co., Ltd., 1897). *Pragmatism: A New Name for Some Old Ways of Thinking* (New York and London: Longmans, Green & Co., Ltd., 1928). A history of American pragmatism is presented by J. Dewey under the title of "The Development of American Pragmatism" in *Philosophy and Civilisation* (New York and London: G. P. Putnam's Sons, 1931), pp. 13–35. In the same work he suggests (p. 299) that pragmatism "marks a return to the idea of philosophy which prevailed when thought was young and 'lusty' ", that is, it is a reversion to the Socratic doctrine that virtue is knowledge, that to perceive the good is to practise it.

[4] 1839–1914. Justus Buchler, *The Philosophy of Peirce: Selected Writings* (London: Kegan Paul, Trench, Trübner & Co., Ltd., 1940). W. B. Gallie, *Peirce and Pragmatism* (Penguin Books, 1952).

[5] Buchler, *The Philosophy of Peirce*, p. 255. The Oxford Dictionary's first reference to "pragmaticism" is dated 1865.

Descartes had not raised, namely, how to make our ideas clear—"the very first lesson that we have the right to demand that logic shall teach us, is how to make our ideas clear".[1] Descartes had derived his criterion of truth from mathematical demonstration where the data possess simplicity, clarity and distinctness, and where advances are made in a regular progression, the whole process being characterised by certainty and completeness. Peirce complained that mathematics was "the most abstract of the sciences, cut off from all inquiry into existential truth",[2] whereas the other sciences deal with "what is positively true, either as an individual fact, as a class, or as a law".[3] It is to the physical sciences[4] in investigating which he claimed to possess a certain proficiency,[5] that Peirce refers when he formulates his rule for attaining clearness of apprehension[6]: "Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then our conception of these effects is the whole of the object." This, taken for the most part literally, became the first article of the pragmatists' creed, but Peirce was too conscious of the stringency of scientific inquiry to sponsor the extravagances of James or the aberrations of Dewey.[7]

[1] Buchler, *The Philosophy of Peirce*, p. 25. The title of ch. 3 is "How to Make Our Ideas Clear". Hobbes had earlier criticised Descartes's criterion of clearness—"for whenever a man feels no doubt at all, he will pretend to this clearness". J. P. McHaffy, *Descartes* (Edinburgh: Wm. Blackwood & Sons, Ltd., 1901), p. 96.

[2] Buchler, *The Philosophy of Peirce*, p. 46. Cf. p. 60. "Mathematics studies what is, and what is not, logically possible, without making itself responsible for its actual existence." Kant had nevertheless in his *Critique of Pure Reason* sought to account for the fact that mathematical constructions were valid for physical phenomena.

[3] *The Philosophy of Peirce*, p. 67.

[4] *The Philosophy of Peirce*, p. 272. Pragmaticism—"a method of ascertaining the meaning, not of all ideas, but only of what I call 'intellectual concepts' ".

[5] *The Philosophy of Peirce*, p. 337.

[6] *The Philosophy of Peirce*, p. 31. Later (p. 290) he puts the formula in the second person, and italicises conceivably, conceive, etc.

[7] Peirce's philosophy is what he himself terms "a conditional idealism" (p. 288). Not content, as Descartes was, with ideas that were clear, they must, for

Pragmatism, as distinguished from Peirce's pragmaticism, is a protest against both naturalism and Hegelian or absolute idealism. Naturalism, doubtless somewhat inconsistently, assumes the universality and objective validity of scientific judgments, while regarding moral and aesthetic values as relative to human ends. Pragmatism applies the same criticism to "the true" that naturalism does to "the good"; each of these values is regarded by the contestants of the opposite school as merely an evolutionary product; pragmatism and naturalism are accordingly mutually destructive. As a consequence of its criticism of naturalism, pragmatism either denies the existence of all absolute values or makes one value—"the good"—absolute. Thus Schiller in *Humanism*[1] maintains that at a blow pragmatism awards to the ethical conception of *Good* supreme authority over the logical conception of *True* and the metaphysical conception of *Real*; in his *Studies in Humanism*[2] he qualifies this somewhat by defining truth as logical value, putting it on an equality with other values like goodness, beauty and happiness, and regarding them as "comingled with each other in a fusion one and indiscerptible".

The chief complaint of pragmatism is, however, against the impersonal, mechanistic interpretation of reality resulting from naturalism; the indifference of science to human hopes and efforts is intolerable to the pragmatist. He consequently advances a view of truth which, as a protection

Peirce, also be true (pp. 40–1). He believed that truth was attainable, although science only gradually approximates to it. "The objectivity of truth consists in the fact that, in the end, every sincere inquirer will be led to embrace it" (p. 288). "The opinion which is fated to be ultimately agreed to by all who investigate, is what we mean by the truth, and the object represented in this opinion is the real" (p. 38). Characteristics of reality are generality (p. 265) and persistence—"if a thing has no persistence, it is a mere dream. Reality is persistence, is regularity" (p. 358), and "without law there is no regularity" (p. 64).

1 F. C. S. Schiller, *Humanism: Philosophical Essays* (London: Macmillan & Co., Ltd., 1903), p. 9.

2 F. C. S. Schiller, *Studies in Humanism* (London: Macmillan & Co., Ltd., 1907), p. 159.

against naturalism, represents it as an integral part "of the purposive reaction upon the universe which bestows dignity and grandeur upon the struggle of human life".[1] For the category of causality which rules in Newtonian science, he would substitute "human purpose" as the dominating conception in the interpretation of experience. This led to the adoption of the title *Humanism*[2] by the English pragmatists.

Idealism agrees with pragmatism in seeking an escape from "the paralysing horror of the naturalistic view of life, the nightmare of an indifferent universe", but it adopts a different course. It accepts without question the validity of the methods and conclusions of science, but points to the incompleteness of the scientific sphere, whereas pragmatism not only questions the universality of scientific judgments but also seeks to discredit the means by which they have been secured, and is thereby itself led to the adoption of the methods of naturalism. All idealists would second James's declaration that we have a right to believe the physical to be only a partial order, that we have a right to supplement it by an unseen spiritual order,[3] but most of them would seek sounder reasons for their belief than those offered by James, who explains that we must take it "on trust", as the spiritual order is one "we have no organ for apprehending", and of which consequently "we can frame no positive idea".

To discount the conclusions of science pragmatism seeks to discredit the mental powers, especially the intellect, by which these conclusions have been attained. Thus we are assured by James[4] that "hardly a law has been established in science, hardly a fact ascertained, which was not first sought after, often with sweat and blood, to gratify an

[1] Schiller, *Studies in Humanism*, p. 158.

[2] The term "Humanism" was doubtless first employed in this sense by A. S. Pringle-Pattison in *Man's Place in the Cosmos and Other Essays* (Edinburgh and London: Wm. Blackwood & Sons, 1897), preface. In *Humanism* (p. 8) Schiller seeks to distinguish between "Pragmatism" and "Humanism", but in *Studies in Humanism* (p. 5, note) he retracts this.

[3] *The Will to Believe*, p. 53.

[4] *The Will to Believe*, p. 55.

inner need. Whence such needs come from we do not know; we find them in us, and biological psychology so far only classes them with Darwin's accidental variations"; and Schiller repeats[1]: "I cannot but conceive the reason as being like the rest of our equipment, a weapon in the struggle for existence and a means of achieving adaptation. It must follow that the practical use, which has developed it, must have stamped itself upon its inmost structure, even if it had not moulded it out of prerational instincts. In short, a reason which has not practical value for the purposes of life is a monstrosity, a morbid aberration or failure of adaptation, which natural selection must sooner or later wipe away." Deprived of reason and intellect as principles of explanation, we are referred to such terms as "practical needs", "efforts of faith", "acts of choice", "subjective passions", "emotional postulates", "guesses which I cannot help making".[2]

The attack directed against science for its dependence on the intellect is extended to Hegelian or Absolute idealism by reason of its too intellectualistic interpretation of reality. The pragmatist, by contrast, "turns away from abstraction and insufficiency, from verbal solutions, from bad *a priori* reasons, from fixed principles, closed systems, and pretended absolutes and origins. He turns towards concreteness and adequacy, towards facts, towards action and towards power"; he likewise demands a universe with "real possibilities, real indeterminations, real beginnings, real ends, real evil, real crises, catastrophes, and escapes, a real God, and a real moral life, just as common-sense conceives these things".[3] Many modern idealists would nevertheless agree with pragmatism in regarding reality as dynamic rather than static, as plastic and capable of development rather than rigid. "For naturalism," James says,[4] "reality is ready-made and complete from all eternity, while for pragmatism

[1] *Humanism*, pp. 7–8.
[2] *Pragmatism*, p. 57
[3] *The Will to Believe*, Preface.
[4] *Pragmatism*, p. 257.

it is still in the making, and awaits part of its complexion from the future." Schiller likewise says[1]: "Reality is still in the making. Nothing is *absolutely* settled. Human operations are real experiments with a reality that really responds. Thus it is our duty and our privilege to co-operate in the shaping of the world." If idealism reduced man's mental activity to mere contemplation of a completely perfect reality, or to a superficial reading of the riddle of the universe without any reaction upon it, it would not long remain an effective force; but even Bosanquet,[2] who argues that the formation of a new reality seems to be a contradiction in terms, admits that when we discover, although we neither add to the universe nor repeat it, we play our part in its self-maintenance, and he contends that it is well to vindicate for the individual mind a living share in the self-maintenance of reality. Eucken would go further; he too believes that not only does human effort count, but that it also enriches reality, that theories are not mere interpretations of reality but products of the creative activity of man, positive enrichments of reality. Through the discovery of a great truth the man of genius enlarges the boundaries of the spiritual realm just as the explorer by his discoveries adds a new land to our geographical world. "Creative thinkers", as he remarks,[3] "are parents in the spiritual world." In striving after the truth, in realising the beautiful, and in battling for the right, man is not, however, merely seeking his own individual satisfaction, as pragmatism suggests; he is co-operating with the Divine, and the universe is the richer for his efforts.

Pragmatism also joins issue with naturalism and idealism in so far as both the latter are monistic, seeking to explain nature, man and God by reduction to a single principle—

[1] *Studies in Humanism*, pp. 218–19. Cf. also pp. 185–6.

[2] B. Bosanquet, *Logic* (Oxford University Press, 1911), vol. ii, pp. 249, 275.

[3] R. Eucken, *Main Currents of Modern Thought*, English translation. (London: T. Fisher Unwin, Ltd., 1912), p. 87.

naturalism to life, idealism to mind or spirit. Pragmatism regards this way of conceiving the universe as singularly unimaginative and lacking in variety.[1] It sees no necessity for seeking one fundamental principle of explanation; it is quite content to admit several principles, and is accordingly pluralistic, but in doing so it abandons philosophical inquiry and reverts to the common-sense attitude to ultimate issues.

For what the modern idealist is prepared to accept in the contributions of pragmatism, he has to give other and sounder reasons. That the idealistic attitude to life is more satisfying than the naturalistic, even the pragmatist would agree, but the idealist seeks the source of such satisfaction in something deeper than mere practical convenience; he analyses this satisfaction and finds it to consist in a more comprehensive scheme of reality than that admitted by naturalism, and in principles in this extended reality, principles or standards like the "ought" of morality and the "truth" of knowledge which have each in its own sphere the same necessity and universality as causality had in the sphere of physical science.

Peirce has succinctly summarised the defects of pragmatism as a philosophy in the statement that action lacks generality.[2] "The pragmaticist", he avers,[3] "does not make the *summum bonum* to consist in action"; and he utterly rejects[4] the view that "a conception is to be tested by its practical effects". The main tenet of his doctrine, he contends,[5] is "the utter inadequacy of action or volition or even of resolve or actual purpose as materials out of which to construct a conditional purpose or the concept of conditional purpose", and he affirms[6] "if pragmatism really made doing the be-all and end-all of life, that would be its death. For to say that we live for the mere sake of action as action

[1] Cf. *Studies in Humanism*, p. 218.
[2] Buchler, *The Philosophy of Peirce*, p. 286.
[3] *The Philosophy of Peirce*, p. 265.
[4] *The Philosophy of Peirce*, p. 259.
[5] *The Philosophy of Peirce*, p. 266.
[6] *The Philosophy of Peirce*, p. 263.

regardless of the thought it carries out, would be to say that there is no such thing as rational purport." Finally, he declares[1] that pragmatism is, in itself, no doctrine of metaphysics.[2]

Bosanquet distinguishes[3] a practical activity in which an end is assumed to be given and cognitive processes are utilised in its attainment, from a theoretical activity in which the end is constructed by thought and in which accordingly the primacy of action over reason cannot be maintained.[4] He even carries the war into the enemy's country, asserting[5] that "no thought, probably, ever had its content exhausted in the adaption of external action; no thought of a cultured mind can ever be so exhausted to-day, even in the most practical of activities; and a very great part of life, a part which even economically and industrially is an immense and commanding interest in the world, has no end in external adapted action at all, but on the contrary uses and transforms such action by making it its means. A great scientific laboratory, for example, has not its unity in a material operation to be produced; its actions have their unity in a

[1] *The Philosophy of Peirce*, p. 271.

[2] In his original article there are nevertheless isolated passages which afford some justification for the misinterpretation of his views, e.g. "different beliefs are distinguished by the different modes of action to which they give rise"; "there is no distinction of meaning so fine as not to consist in anything but a possible difference of practice", p. 29. Had he substituted the term "general behaviour" (p. 272, cf. p. 301) for "different modes of action" his views would not have been so liable to misinterpretation. Shakespeare anticipated Peirce when he wrote—"Thoughts are but dreams till their effects be tried". *Historical Plays*, Everyman edition, p. 765.

[3] *Logic*, vol. ii, pp. 244–5, footnote.

[4] The relation of action and thought was considered by Fichte, who, in his *Addresses to the German Nation* (English translation—Chicago and London: The Open Court Publishing Co.. 1922—p. 75), says: "One sometimes hears the question put: What is the use of all knowledge, if one does not act in accordance with it? This remark implies that knowledge is regarded as a means to action, and the latter as the real end. One could put the question the other way round, and ask: "How could we possibly act well without knowing what the Good is? This way of expressing it would regard knowledge as conditioning action. But both experiences are one-sided, and the truth is that both, knowledge as well as action, are in the same way inseparable elements of rational life."

[5] *Logic*, vol. ii, p. 249.

cognition to be attained". In his *Principles of Political Economy*[1] J. S. Mill has assigned a greater importance to thought than to action. "No limit", he asserts, "can be set to the importance even in a purely productive and material point of view, of mere thought." Dewey himself in *Problems of Men*[2] has come to recognise this. "Justice Holmes once said", he quotes, "that theory was the most practical thing in the world." "This statement", he adds, "is preeminently true of social theory of which educational theory is a part." It is likewise true in other spheres, and we need only recall that the theories of nuclear fission preceded the production of nuclear power. The Kon-Tiki expedition and the ascent of Everest may be instanced as exploits inspired by the desire to substantiate a theory or to realise an ideal which did not originate out of immediate necessities or eventuate in practical gains. The authors of great achievements in human history have indeed flouted, and flown in the face of, the pragmatist's contentions and restrictions. They have held fast to some truth indifferent to the consequences. Brave souls there have always been who adventured forth, not counting the cost, to discover the unknown and to achieve the impossible.

Whitehead also assigns priority to thought over action, to theory over practice, remarking[3]: "The world dreams of things to come, and then in due season arouses itself to their realisation. Indeed all physical adventure which is entered

[1] J. S. Mill, *Principles of Political Economy* (London: John W. Parker, 1848), vol. i, pp. 52, 53.

[2] (New York: The Philosophical Library, 1946), p. 72.

[3] *Adventures of Ideas* (Pelican Books, 1942), p. 321. Cf. nevertheless p. 131, where he claims that in the early stages of civilisation "undoubtedly ideas modified the practice. But in the main practice preceded thought". Russell, however (*History of Western Philosophy* (Allen and Unwin, Ltd., 1946), pp. 624–5), takes the opposite view: "In the advanced countries practice inspires theory; in the others, theory inspires practice." Humphrey concludes that "in general while a human being thinks his problem out, an animal acts it out" (*Thinking: An Introduction to Its Experimental Psychology* (Methuen & Co., Ltd., 1951), pp. 310–11).

upon of set purpose involves an adventure of thought regarding things as yet unrealised." There is accordingly in these days still need of young men to see visions and old men to dream dreams. Otherwise, as the Old Testament warns us, "Where there is no vision, the people perish".

Apart from action, as Whitehead adds,[1] the contemplation of truth has an interest of its own. And Dewey, at least in regard to mathematical manipulation, admitted this.[2]

Paradoxical as it may seem, the pragmatic test that the validity of a principle can only be judged by its practical consequences does not apply in the affairs of daily life.[3] The consequences can only be assessed in some circumstances after the event has occurred, in others the consequences are too involved to be disentangled, in still others the consequences are too remote to be foreseen—indeed, in certain legal trials the verdict turns on the issue whether the accused could have foreseen the consequences of his act.[4] Naturalism has its discipline by consequences, pragmatism the validation of truth by its consequences; objections urged against the former are for the most part applicable to the latter.

Peirce has dissociated his pragmaticism from any concern with practice, and has no high opinion of the typical pragmatist—the man who insists on getting something done, whether it is right or wrong, likely to be successful or not; "it is quite impossible", he says,[5] for "a practical man to comprehend what science is about unless he becomes as a little child and is born again"; true science is distinctly the

[1] *Adventures of Ideas*, p. 281.

[2] John Dewey, *How We Think* (London: D. C. Heath & Co., 1909), pp. 182–3.

[3] Cf. W. B. Gallie, *Peirce and Pragmatism*, p. 168: "If pragmatism in its narrower form were to be applied to most of our *everyday*, as opposed to our scientific, conceptions of different kinds of substance, nothing but useless pedantry would result." See whole Chapter VII, "An Ambiguity in Peirce's Pragmatism".

[4] General Eisenhower at the annual convention of the American Bar Association in Philadelphia on the 26 August 1955 asked—"Has any great accomplishment in history begun with assurance of its success?"

[5] Buchler, *The Philosophy of Peirce*, p. 311.

study of useless things. For the useful things will get studied without the aid of scientific men.[1]

Schiller disowns the interpretation of pragmatism that the organisation of reality effected by thought is confined to the production of material change in things, suggesting[2] that we should conceive "practice" more broadly as *the control of experience*; but if pragmatism adopted this extended sense of "practice" it would be difficult to find in it any distinctive principle justifying its existence, and Schiller virtually retracts it in the same sentence by again defining as "practical" whatever serves, directly or indirectly, to control events.

Peirce believed that his own pragmatism had a quite valid application, but only within the restricted sphere of scientific inquiry; even here, however, as has been observed,[3] its value is merely negative. "The truth of memory", as Bertrand Russell has also pointed out,[4] "cannot be wholly practical, as pragmatists wish all truth to be." And the instance he gives is[5]: "You may believe that America was discovered in 1492 or that it was discovered in 1066. In the one case your belief is true, the other false; in either case its truth or falsehood depends upon the actions of Columbus, not upon anything present or under your control." Pragmatism thus evidently fails because it applies to the whole field of human endeavour a test of validity appropriate only to experimental science. It also ignores the existence of purely theoretical interests.

The pragmatic philosophy has reinforced certain ten-

[1] *The Philosophy of Peirce*, p. 48. [2] *Studies in Humanism*, p. 130.

[3] A. D. Ritchie, *Reflections on the Philosophy of Sir Arthur Eddington* (Cambridge University Press, 1948), p. 22: "If anybody says this is pragmatism [the arbitrary that fails to operate is vicious] the reply is that the method of science is pragmatic and the only error of the upholders of the '-ism' is to turn negative into positive. Failure, in the sense of failure to control, is the prime test of falsehood; but success in control is not the sole test of truth, nor does it constitute the nature of truth."

[4] *The Analysis of Mind* (Allen and Unwin, Ltd., 1921), p. 165.

[5] *The Analysis of Mind*, p. 232. Cf., however, p. 272.

dencies in modern educational theory and practice.[1] Dewey, in *Problems of Men* (p. 18), claims: "The pragmatic philosophy, so called, has made a start in helping to break down in the field of education that separation of the 'utilitarian' and the 'liberal' which restricts alike the former and the latter." But the report of the Royal Commission on Secondary Education published in 1895 anticipated pragmatism: "No definition of technical education is possible that does not bring it under the head of Secondary Education, nor can Secondary Education be defined as absolutely to exclude from it the idea of technical instruction."

Without committing oneself to the ultimate subordination of the theoretic to the practical reason, one can welcome the pragmatic method in so far as it emphasises the insufficiency of merely theoretical exposition and the necessity for the pupil working out the practical application of a principle. That the pupil should be aware of, and appreciate, the method by which a truth is discovered or a principle established has been insisted on by the inductive and heuristic methods of teaching; the pragmatic method insists on the complementary aspect, namely, that for the pupil's full understanding of a principle he should see it in its application to facts, he should see it actually tried out. Kilpatrick's "purposeful act" comprises both aspects in its four steps; purposing, planning, executing, judging[2]; both might even be said to have been comprised in the "preparation" and the "application" stages of the old Herbartian lesson plan. We can agree with Dewey when he admits[3] that "it is not too much to say that marriage between theory and practice is in the end the chief meaning of a science and a philosophy of education that work together for

[1] Thomas H. Briggs, *Pragmatism and Pedagogy* (New York: The Macmillan Co., 1940).

[2] W. H. Kilpatrick, *The Foundations of Method* (New York: The Macmillan Co., 1925), pp. 203–16.

[3] *Problems of Men*, p. 168

common ends". It is interesting to observe that Rousseau, with whom in the tasks he set for Émile the project method might historically be said to have had its origin, restricted this method to the 12–15 stage, to the "utility" stage of his pupil's development, on which supervened the aesthetic, moral and religious, that is, the cultural, stage.

As there is a tendency for pragmatism to interpret life in too restricted a fashion, so there is a danger that educational plans based on pragmatic philosophy may degenerate into somewhat narrow utilitarian schemes. In consequence, the cultural activities which exist for their own sake and are not mere means to material advancement fail to secure their rightful place. If the intellectualism in education resulting from Plato's too drastic separation of the sensible and intelligible worlds led to the neglect of experimental science and practical work in education, the pragmatist's undue emphasis on practice is in danger of leading to the complementary error of neglecting pure science, of making art the handmaid to the crafts, and of employing poetry merely to decorate a project.[1] If, too, thought can set its own end, knowledge for its own sake may be a possible motive and a "liberal" education may still be recognised as a worthy aim.[2]

[1] B. H. Bode, condemning anti-intellectualism in another connection, suggests that it "is reflected in the reliance on improvising instead of long-range organisation, in the over-emphasis of the here and now, with indiscriminate tirades against 'subjects' in the absurdities of pupil-planning, and in the lack of continuity in the educational program". *Progressive Education at the Crossroads* (New York: Newsom & Co., 1938), p. 70.

[2] Cf. J. G. Fichte, *Addresses to the German Nation*, English translation, p. 25: "Here we have found an outward sign of true education, at once obvious and infallible; namely, that every pupil on whom this education is brought to bear, without exception, and irrespective of differences in natural talent, learns with pleasure and love, purely for the sake of learning and for no other reason."

CHAPTER VI

Instrumentalism and Experimentalism

INSTRUMENTALISM and Experimentalism are different phases of John Dewey's philosophy which is generally regarded as an outcome of pragmatism. In spite of Dewey's disclaimer[2] that his pragmatic instrumentalism does not imply that action is higher and better than knowledge, and practice inherently superior to thought, and his accusation that James, mistaking paradox for philosophy, merely turns things upside down, statements indistinguishable from the popular view of pragmatism are too numerous in Dewey's work to allow him to evade the charge of pragmatism. His position might nevertheless be regarded as complementary to, than as a development of, pragmatism. Whereas pragmatism claims that the validity of beliefs depends on the consequences that accrue from their acceptance, Dewey concerns himself rather with the antecedents than with the conse-

[1] Biography

The Philosophy of John Dewey. Edited by Paul Arthur Schlipp. The Library of Living Philosophers, vol. i (Evanston and Chicago: The North Western University, 1939). A biography of John Dewey serves as Chapter I of this work.

Origin of Instrumentalism

Morton G. White, *The Origin of Dewey's Instrumentalism*. Columbia Studies in Philosophy, No. 4 (New York: Columbia University Press, 1943).

Dewey's Own Account of Origin

Contemporary American Philosophy, vol. ii, edited by C. P. Adams and W. P. Montague (London: George Allen & Unwin, Ltd., New York: The Macmillan Co., 1930). John Dewey—"From Absolutism to Experimentalism".

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[2] *The Quest for Certainty: A Study of the Relation of Knowledge and Action* (New York: Minton, Balch & Co., 1929), p. 37, footnote.

quences, with the origins of beliefs rather than with their validity, maintaining that there is no way of telling what the consequences are save by discovery of antecedents.[1] The resulting preoccupation with means rather than with ends accounts for the title—"Instrumentalism".[2]

The commonest fallacy in education is for the means to obscure the end; educational practitioners are usually so immersed in teaching procedures that they lose sight of the ultimate purpose of their work; in lessons, likewise, illustrations tend to usurp the place of exposition. It has accordingly been said of the progressive teacher that she must be in the van of progress no matter where it is going. Dewey makes of this failing a virtue, exalting means and depreciating ends. In his *Democracy and Education*[3] he distinguishes between "ends" and "aims". The essential characteristics of ends are a definite temporal sequence of the events and a continuity in the process—"the way each prior event leads into its successor while the successor takes up what is furnished and utilizes it for some other stage, until we arrive at the end, which, as it were, summarizes and finishes off the process".[4] An aim, in addition, implies foresight of the end or of the completion of the process. The result of the activity of bees may, as Dewey instances, be called ends because they are trial terminations or completions of what has preceded; only, however, if the bees anticipated the outcome of their activity, if through imaginative foresight they perceived the termination of their actions, would they have the primary element in an aim. This illustrates the difference

[1] J. Dewey, *Problems of Men* (New York: The Philosophical Library, 1946), p. 109.

[2] "Instrumentalism is an attempt to establish a precise logical theory of concepts, of judgments and inferences in their various forms, by considering primarily how thought functions in the experimental determinations of future consequences." J. Dewey, "Development of American Pragmatism", *Philosophy and Civilisation* (New York: G. P. Putnam's Sons, 1931), p. 26.

[3] *Democracy and Education: An Introduction to the Philosophy of Education* (New York: The Macmillan Co., 1916), ch. viii.

Democracy and Education, p. 118.

between the instinctive behaviour of animals and human action and conduct. The presence of the aim, the product of constructive imagination, completely inverts the order of events; it involves a telic procedure, action self-directed towards a preconceived end instead of behaviour determined merely *a tergo*. Man can hitch his wagon to a star. He is thereby raised to a realm of experience where he can anticipate events and short-circuit action. Dewey nevertheless refrains from acknowledging this higher dimension of experience. He concerns himself only with aims which belong within the process in contrast to aims which are set up independently.[1]

On the significance of aims in education and in teaching there is practical unanimity, and to Dewey's chapter nothing need be added. The Germans use the term *Zielangabe* for the statement of the aim in lessons, and the term *Zielsetzung* employed in the same sense goes as far back as 1780.[2] On the relation of means to ends Dewey's account must nevertheless be challenged. In *Human Nature and Conduct*[3] he defines the end as a series viewed at a remote stage and a means merely the series viewed at an earlier one. Means and end are merely different stages of the same process. The time order of events is not, however, always sufficient to distinguish means from ends; the end is rather the consummation of the means. "If one buys a piano on the instalment plan, one's purpose is not to have something to

[1] *Democracy and Education*, p. 117. In *A Common Faith* (New Haven: Yale University Press, 1934) when dealing with religion Dewey revises his earlier disparagement of imaginative insight, p. 44: "The reality of ideal ends and values in their authority over us is an undoubted fact," p. 43: "The reality of ideal ends as ideals is vouched for by their undeniable power in action. An ideal is not an illusion because imagination is the organ through which it is apprehended. For all possibilities reach us through the imagination."

[2] J. Adams, *Exposition and Illustration in Teaching* (London: Macmillan & Co., Ltd., 1909), ch. vii.

[3] London: George Allen & Unwin Ltd., 1922, pp. 34–6. Cf. *Democracy and Education*, p. 124: "We call it end when it marks off the future direction of the activity in which we are engaged; means when it marks off the present direction."

pay for it in the end."[1] Alternatively, Dewey explains that the end is the name for a series of acts taken collectively—like the term "army". Means is a name for the same series taken distributively—like this soldier, that officer. But a collection of soldiers is not necessarily an army; it may merely be a mob. An army is a collection of soldiers organised to perform a definite function. The end in all cases is really the source of inspiration and the organising and directing principle of the process of which the means are the constituent elements.[2] The constellation which it envisages possesses properties which do not belong to the constituent parts. The identification or essential sameness of ends and means implied in Dewey's doctrine is merely another instance of the naturalist's fallacy of ignoring the distinction between "what is" and "what should be", between fact and value. *The Educational Frontier*[3] offers a grudging admission of the real function of ends: "A goal cannot be intelligently set forth apart from the path which leads to it. Ends cannot be conceived as operative ends, as directors of action, apart from consideration of conditions which obstruct and means which promote them. If stated at large, apart from means ends are empty. Ends may begin as the plan and purpose, in the rough. This is useful if it leads to search for and discovery of means. So the otherwise bare idea of building a house may be the first stage in thinking out detailed plans and specifications for its erection, and thus be translated over into a statement of means."

Chesterton, in his own paradoxical way, has indicated the

[1] Christian O. Weber, *Twentieth Century Psychology*. "Difficulties of Modern Psychology" (New York: The Philosophical Library, 1946), p. 70.

[2] A. N. Whitehead, in "Philosophy of Life" in *Twentieth Century Philosophy* (New York: *The Philosophical Library*, 1943), says that by "aim" is meant the exclusion of the boundless wealth of alternative potentiality, and the inclusion of that definite factor of novelty which constitutes the selected way of entertaining those data in that process of unification.

[3] Written in collaboration by W. H. Kilpatrick (editor), B. H. Bode, J. Dewey, J. H. Childs, etc. (New York: The Century Company, 1933). The passage quoted appears on p. 296, ch. ix, assigned to Professors Dewey and Childs.

significance of each thus[1]: "None of the strong men in strong ages would have understood what you meant by writing for efficiency. Hildebrand would have said that he was working not for efficiency, but for the Catholic Church. Danton would have said that he was working not for efficiency but for liberty, equality and fraternity. Even if the ideal of such men were simply the ideal of kicking a man downstairs, they thought of the end like men, not of the process like paralytics. They did not say 'Efficiently elevating my right leg, using, you will notice, the muscles of the thigh and calf, which are in excellent order, I . . .' Their feeling was quite different. They were so filled with the beatific vision of the man lying at the foot of the staircase that in that ecstasy the rest followed in a flash."

The degradation of ends to a parity with means has a parallel in Dewey's doctrine of thinking. Thought performs merely a subservient office in the mental life; it is an activity possessing only a purely instrument function. Man is not regarded as capable of prospective thinking. Action must await a felt need. Planning in advance is an imaginative activity and is accordingly relegated to a place inferior to practice. But, as Whitehead puts it[2]: "Where there is no anticipation, change has to wait upon chance, and peters out amid neglect." And it is pertinent to ask, if action must await a felt need, what would happen to a painter if at the moment of inspiration, he had to sit down and manufacture his brushes?[3] The educational corollary that Whitehead draws[4] is that "the finest flower of youth is to know the lesson in advance of the experience". And the art of the statesman is to forestall events.

[1] G. K. Chesterton, *Heretics* (London: John Lane, 1914), p. 18.
[2] *Adventures of Ideas* (Pelican Books, 1942), p. 68.
[3] *The Advanced Montessori Method* (London: Wm. Heinemann, Ltd., 1918), vol. ii, p. 106.
[4] *Adventures of Ideas*, p. 329.

Just as a question has more suggestive significance in teaching than a direct statement, so problem-solving, which is the main feature of Dewey's doctrine of thinking, provides a challenge and incentive to the pupil which the traditional methods of exposition cannot afford. While Dewey's contribution to educational method in this respect must be recognised, problem-solving is not the whole story of the psychology of thinking, for Dewey has offered no explanation as to how a problem originates. Thus thousands had seen the long white pole bearing a gilded ball at its tip which projected nearly horizontally from the upper deck of the ferryboat[1] without inquiring what function it served. The impulse to seek an explanation was wanting to them. It is left to the original thinker to ask, Why?

The failure to account for the prime-mover of the mechanism of thought is a feature of most theories of thinking. The Wurzburg school of psychologists—Watt, Ach, Bühler—emphasised the significance of the *Aufgabe* (the task to be undertaken, the directive or the instruction to be followed) in originating and directing the thought process, but left the origin of the *Aufgabe* unaccounted for. Humphrey[2] also directs attention to the incompleteness of Selz's theory of thinking on the ground that productive thinking results in complex-formation and not merely in complex-completion, as Selz envisaged. The complex has to be created; unless a familiar instrument or an old method is used to form part of a novel unity, the ensuing thought is not productive. Dewey likewise leaves unexplained the indispensable feature—the impetus that sets the whole process of thinking in motion. Thought is, however, not restricted

[1] J. Dewey, *How We Think* (London: D. C. Heath & Co., 1909), pp. 91–4. Cf, the writer's *Doctrines of the Great Educators* (Macmillan & Co., Ltd., 1954), pp. 298–9.

[2] George Humphrey, *Thinking: An Introduction to its Experimental Psychology* (London: Methuen & Co., Ltd., 1951), pp. 143–5.

to meeting a situation or solving a problem; it may originate a situation and devise problems.[1]

Effective thinking is not, as Dewey declares,[2] only possible where the experimental method in some form is used. The experimental psychology of thinking provides abundant examples of thinking in which experiment plays no part and in the solution of which even imagery is not present.[3]

Deduction has also contributed to the advancement of knowledge. In fact, instances of his own thinking which Dewey cites in *How We Think* are examples of deductive inference.[4] Dewey also neglects reasoning. Shakespeare, it has been pointed out,[5] assumed that a beast, as distinguished from a man, lacks "discourse of reason", for when Hamlet wished to distinguish a man from other species of animal life, he mentioned "a beast that wants discourse of reason". Köhler's experiments with apes[6] have demonstrated that animals have a capacity for practical thinking; they can solve problems within the perceptual field. Reasoning, however, involves justifying the solution, and that is man's prerogative and not the beasts.[7] Man is constantly called upon to adduce reasons for a projected course of action or for a proposal made. Parliamentarians support their measures by argument; the higher courts of law issue judgments setting forth the reasons for their decisions on con-

[1] Humphrey, *Thinking*, p. 180. For review of modern theories of thinking see Presidential Address to Section J of the British Association, 1954, by L. S. Hearnshaw, entitled: "Recent Studies in the Psychology of Thinking". *The Advancement of Science*, vol. xi, no. 42, pp. 220–31.

[2] *How We Think*, p. 188.

[3] See references to "Imageless Thinking" in Humphrey's Index. In this Index the only reference to Dewey is in a single footnote.

[4] See writer's *The Doctrines of the Great Educators*, pp. 298–301. Cf. A. N. Whitehead, *Process and Reality*, p. 14: "The primary method of mathematics is deduction."

[5] Hugh H. Hudson, *Educating Liberally* (Stanford University Press, 1945), p. 10.

[6] W. Köhler, *The Mentality of Apes* (London: Kegan Paul, Trench, Trübner & Co., Ltd., 1925).

[7] Cf. Peirce in Buchler, *The Philosophy of Peirce* (London: Kegan Paul, Trench, Trübner & Co., Ltd., 1940), p. 290. The term "reasoning" ought to be confined to such fixation of one belief by another as is reasonable, deliberate, self-controlled.

flicting issues; sermons are preached justifying the ways of God to man. These are rational issues, not mere means to the solution of practical problems, and are far removed from the type of problem to which Dewey devotes almost exclusive attention.

With greater assurance than with respect to pragmatism could Dewey claim to have derived his experimentalism[1] from Peirce who affirmed: "In order that science may be successful its votaries must hasten to surrender themselves at discretion to experimental inquiry in advance of knowing what its decision may be. There must be no reservation."[2] In inductive inquiry resort is had to experiment to decide between alternative hypotheses or to substantiate a provisional hypothesis. It plays merely a subordinate part, the hypothesis being "the one form of inference that originates wholly new ideas, that plays a distinctive rôle in the advancement of knowledge".[3] As Peirce declared[4]: "Every concept, every general position of the great edifice of science, first came to us as a conjecture." Whitehead adds[5]: "The distinguishing mark of modern civilisation is the number of institutions whose origin can be traced to the initial entertainment of some idea." Dewey's exaltation of experiment over hypothesis is an additional instance of the means supplanting the end. In ignoring or belittling the creative feature and emphasising the mechanical procedure in the development and verification of knowledge Dewey's

[1] J. Dewey, *Problems of Men*, pp. 136–7. "The positive counterpart of opposition to doctrinal absolutism is experimentalism." But Whitehead comments (*Adventures of Ideas*, p. 108): "Discussion on the method of science wanders off on to the topic of experiment. But experiment is nothing else than a mode of cooking the facts for the sake of exemplifying the law."

[2] Buchler, *The Philosophy of Peirce*, p. 47. Cf. W. B. Gallie, *Peirce and Pragmatism*, p. 111: "He [Peirce] thinks and writes, now as a mathematician or formalist seeking to give his ideas the most exact definitive or demonstrative character possible, now as an experimentalist trying out some idea, seeking to evaluate it by its effects, by the way it assists in the solution of a variety of problems."

[3] Gallie, *Peirce and Pragmatism* (Penguin Books, 1952), p. 98.

[4] Buchler, *The Philosophy of Peirce*, p. 280. [5] *Adventures of Ideas*, p. 82.

attitude is surprisingly akin to that of Bacon: "The fact of having eloquently proclaimed the necessity of experimental research at an epoch when deduction was alone in favour is Bacon's imperishable merit," but, as the same writer remarks,[1] "it must not be forgotten that research is always dominated by preconceived ideas—that is, by hypotheses; contrary to what Bacon believed they are indispensable in guiding our advance."

Experiment is a planned procedure, not mere trial-and-error. As Dewey himself warns us[2]: "The method is that of maximum reliance upon intelligence." While Dewey gives precedence to overt action involved in active inquiry, others would assign importance to the directing ideas; in *How We Think*[3] Dewey conceded that the testing of hypothesis may be effected by acting upon it, overtly if possible, otherwise in imagination. "Testing in thought for consistency involves acting in imagination." Peirce had earlier conceded that the validity of hypotheses might be tested in imagination or by their "conceivable" effects.[4] Thus the procedure is admitted to be wholly cognitive.

The introduction of measurement, as already indicated,[5] inaugurated the scientific age. Dewey, however, tends to identify science with technology,[6] and as a consequence to regard the principle of experimental inquiry as the life-blood of the entire advance made in the sciences.[7] Advances in science are nevertheless as much, or even more, dependent

[1] E. Meyerson, *Identity and Reality* (English translation, George Allen & Unwin, Ltd., 1930), p. 403, p. 6. In *Philosophy and Civilisation*, p. 329. Dewey nevertheless remarks: "When ideas, hypotheses, begin to play upon facts . . . then light dawns."

[2] *Problems of Men*, 1946. Pp. 137–8. Cf. *The Quest for Certainty*, pp. 86–7.

[3] *How We Think*, pp. 98, 104–5, 107.

[4] Gallie, *Peirce and Pragmatism*, p. 155.

[5] See ch. i.

[6] *Problems of Men*, p. 291, footnote: "It is probable that I might have avoided a considerable amount of misunderstanding if I had systematically used 'technology' instead of 'instrumentalism' in connection with the view I put forth regarding the distinctive quality of science as knowledge."

[7] Cf. *Problems of Men*, pp. 154, 158

on concepts to create a meaningful and coherent pattern of observed data as they are on the results of experiments; a science like astrophysics, for example, does not employ experiment and has no significant practical application.

The scientific method, as conceived by Dewey, is a method of effecting change; he repeatedly connects science with change.[1] "According to the present conduct of science and according to its conclusions, science consists of knowledge of orders of change."[2] And change means "continuous growth, development, liberation and co-operation".[3] The experimental attitude in science with its emphasis on change has accordingly for him outmoded the uniform and immutable view of the cosmos.

While Whitehead[4] recognises that "the element of novelty which life affords is too prominent to be omitted from our calculations", he equally recognises the obverse (p. 130): "The notion of Law, that is to say, of some measure of regularity or of persistence or of recurrence is an essential element in the urge towards technology, methodology, scholarship and speculation. Apart from a certain smoothness in the nature of things, there can be no knowledge, no useful method, no intelligent purpose." The need for something fixed, something determinate, has kept emerging all down the history of philosophy.

The truths of the Christian religion, too, have never had a merely local and temporary significance. They are accepted as eternal verities; they appeal to man with an authority that brooks no questioning; they are as far removed from the expedient as could well be, and for them men would even dare to die.

Democracy is likewise dependent on change, according to Dewey: "The very foundation of the democratic procedure is dependence upon experimental production of

[1] *Problems of Men*, pp. 288, 293.
[2] *Problems of Men*, p. 288.
[3] *Problems of Men*, p. 157.
[4] *Adventures of Ideas*, p. 116.

social change."[1] "The chief opportunity and chief responsibility of those who call themselves philosophers are to make clear the intrinsic kinship of democracy with the methods of directing change that have revolutionised science."[2] It was nevertheless in the pre-scientific age that the conception of democratic government emerged. "The democratic constitution alone", declares Hegel,[3] "was adapted to the spirit and political condition of the Greek people." And of the city republics of ancient Greece, Bryce, in his *Modern Democracies*, writes[4]: "Their brief but brilliant life furnished the earliest examples of what men can achieve in the task of managing their affairs by popular assemblies, and the literature which records and criticises their efforts is one of the world's most precious possessions, destined to retain its value so long as civilised society exists." Nor should the contribution of the Christian doctrine that all men are equal in the sight of God be underestimated.

In the political sphere the corollary of change is not democracy but revolution, and there were times when Dewey countenanced revolutionary movements merely because they occasioned change whether or not they effected improvements in social or political conditions. Democratic government displays a certain stability which is inconsistent with Dewey's assumptions. Democracy also regards persons as ends in themselves, whereas, if Dewey were consistent, they could be treated as mere means which any dictator might enlist to attain power.

Although Dewey assumes the continuity of animal and human experience, he rejects the instinctivist explanation of human behaviour.[5] He agrees with idealism in affirming

[1] *Problems of Men*, p. 157. [2] *Problems of Men*, p. 158.
[3] *Philosophy of History*. Trans. by J. Sibree (London: H. G. Bohn, 1861), pt. ii, p. 260.
[4] James Bryce, *Modern Democracies* (London: Macmillan & Co., Ltd., 1921), vol. i, p. 8.
[5] *Human Nature and Conduct*.

that without freedom morality is impossible. He rightly observes[1] that while contingency in the physical world is a necessary, it is not a sufficient, condition of freedom, and maintains that we are free in the degree in which we act knowing what we are about. Freedom thus implies intellectual understanding and mastery of the situation; this constitutes the higher, the positive, type of freedom in contrast to the negative type of freedom as mere absence of restrictions. The freedom to develop naturally, that is, in the absence of all restrictions, which progressive educationists claim, amounts to little more than the licence to run wild. There is one genuine discipline, Dewey explains,[2] namely, "that which takes effect in producing habits of observation that ensure intelligent desires", and he adds: "the secret of education consists in having that blend of check and favour which influences thought and foresight, and that takes effect in outward action through this modification of disposition and outlook".

Deprived by his denial of absolute values, of an objective and universal criterion of goodness, and by his rejection of human motives the instrumentalist must adopt the pragmatic test of judging conduct by its consequences. Herbert Spencer, in justifying his discipline by natural consequences, remarks[3]: "It is by an experimentally gained knowledge of natural consequences that men and women are checked when they go wrong." Spencer neglected to take account of the social consequences of actions, and if we but substitute the social for the natural consequences, the instrumentalist's ethical doctrine would be fairly well represented by Spencer's statement.

Social approval becomes the criterion of right conduct. "Customs constitute moral standards."[4] Men "form their

[1] *The Quest for Certainty*, p. 249. [2] *Philosophy and Civilisation*, p. 290.
[3] Herbert Spencer, *Education: Intellectual, Moral and Physical* (Williams & Norgate, 1906), p. 138
[4] *Human Nature and Conduct*, p. 75. Cf. title of last chapter of same work: "Morality is Social".

judgments and carry on their activity on the basis of public, objective and shared consequences"[1]; "the moral and the social quality of conduct are, in the last analysis, identical with each other".[2]

In primitive communities morality may be equated to custom, but as society develops morals cease to be customs, for acting morally involves interpretation and the use of reason. Socrates challenged the traditional proprieties of the Athenians and contended that man must be able to give a reason for his conduct. It was thus that ethics was born.[3]

Morality implies free self-initiated action, not mere re-action to social convention. Man has been prepared to sacrifice even existence itself to truth, to justice or to love. He has also had an occasion to oppose the society of which he is a member in the interests of a higher loyalty. "The truly virtuous man," it is explained,[4] "is he who has raised himself above habit and convention and by his knowledge has criticised and changed the manners of his fellow citizens. The history of our race is the sombre tale of how a few good men from time to time have seen a little further than their fellows and rescued them from their misery." Bertrand Russell,[5] instancing the teaching of Christ, states that such ethical innovations obviously imply some standard other than majority opinion.

Just as "the good is an ultimate qualification not to be analysed in terms of any things more final than itself",[6] so there are certain virtues which have intrinsic worth and do

[1] *The Quest for Certainty*, p. 47.

[2] *Democracy and Education*, p. 415.

[3] The introduction of the various characters in the Proem to Plato's *Republic* represent stages in the evolution of morality. Cephalus—tradition; Polemarchus—authority; Thrasymachus—critical stage; Glaucon and Adeimantus—the rational or metaphysical stage.

[4] H. S. Crossman, *Plato To-day* (London: George Allen & Unwin, Ltd., 1937), p. 224.

[5] *History of Western Philosophy* (London: George Allen & Unwin, Ltd., 1946), p. 139.

[6] A. N. Whitehead, *Adventures of Ideas*, p. 176.

not depend on social sanctions. Kant[1] instances fidelity to promises and benevolence from principle (not from instinct).

The only theory of art compatible with instrumentalism is that of functional fulfilment—the more efficiently an object performs its function the more aesthetic satisfaction it will produce in the beholder. The evolution of the axe or the aeroplane serves as illustrations. While functional fulfilment was a justifiable protest against the nineteenth-century conception of art as mere external decoration, it itself does not afford a complete answer. Many objects preserve their artistic value after they have lost their utility, as every museum witnesses, and many efficient appliances have no aesthetic merit. The architecture of a factory must accommodate itself to the assembly line.

In his treatment of art Dewey abandons instrumentalism and, as he has denied the possibility of intrinsic values, reverts to the naturalistic explanation of art. Dewey's belief in the continuity of the biological and human experience makes possible, he believes,[2] the application of biological conceptions to the whole field of artistic structures and aesthetic criticism. And, like Herbert Spencer, he is compelled to regard art and play as synonymous, as recreations[3]; they are, in the terminology of modern psychology, "compensations". Dewey[4] links play and art, and asserts that both are due to the failure in some part of man's constitution to secure fulfilment in ordinary ways. It is nevertheless an insult to the artist and a travesty of his work to relegate it to the domain of play, or to regard it merely as an outlet for surplus energy, as Spencer does. This would educe from the artist the obvious *tu quoque* retort that the activity of the

[1] *Fundamental Principles of the Metaphysic of Morals* (London: Longmans, Green & Co., Ltd., 1895), p. 64.

[2] J. Dewey *et al.*, *Art and Education* (New York: The Barnes Foundation Press, 1929), p. 71.

[3] *Human Nature and Conduct*, p. 160.

[4] *Human Nature and Conduct*, pp. 161–3.

philosopher might equally be considered play. Accordingly, criticising Spencer's view of art, Nunn comments[1]: "But when we think of men whose art was in truth their life and consider how eagerly the better part of mankind cherishes their memory and their works, it is next to impossible to be satisfied with that view."

Art is not a compensation for failure in practice. It is one phase of ultimate reality. It is an attempt to express the "antecedent being" the existence of which pragmatism and instrumentalism deny. Just as science seizes upon certain arrangements and collocations of the physical world and writes their equations in mathematical formulae, thus conferring on them a fixity and bestowing on them an intelligibility, so through the passing show the artist seeks to lay hold of the real, and to express it not in mathematical notation but in a plastic medium and bestows on it a quality that renders it timeless. The function of the artist is to discern the beautiful where it may be as yet apparent to no other human eye or ear, to arrest it and fix it in permanent and perfect form that others may likewise experience it; he thus makes it eternal and universal. His task is in a sense an act of divine creation; it strives after perfection. Plato calls it a divine madness, because it is something more than human. The artist has seen the Divine, and so intoxicated is he with the vision that he seeks to preserve it for all time that others may behold it too. To the artist it is an act of creation; to others a revelation. And the truer the artist's vision and the more competent his technical skill, the more enduring the revelation; it becomes a possession for all time and for all peoples; the thing of beauty becomes a joy for ever.

Art thus moves in a different plane from the biological; it exists in another dimension to which instrumentalism has

[1] T. Percy Nunn, Presidential Address to Section L(Educational Science) of the British Association, 1923.

no key. To align it with the practical, as Dewey does, is likewise to contaminate it; the explanation he offers of the aesthetic and the artistic is that "both are incidental to practice, to performance".[1] But, disposing of "Popular Fallacies in Aesthetics", Laurence Buermeyer argues[2]: "Its [art's] true nature can only be understood if we draw a distinction between the active and the imaginative life. We are conscious in both of a world of objects, but it is only in the active life that we are obliged to, or in fact can, do anything about them. In this realm the things of which we are aware contain a promise or a threat, they are signals of events to come, events which we may wish to promote or to prevent. . . . In the life of the imagination, however, there are no practical exigencies, and we are at liberty to contemplate objects in their concrete fullness. To embody in permanent form the world thus contemplated for its own sake is the purpose of art." Buermeyer instances a signpost which, if it indicates the right direction, serves its purpose; its proportions, colour scheme and other embellishments are indifferent to the wayfarer, but yet in these lies its aesthetic appeal.

On the other hand, Dewey can be seconded in his refusal to countenance the explanation of art as an expression of mere emotion, arguing[3]: "There is mere indulgence in emotional outpouring, without reference to the conditions of intelligibility. Such 'expression of emotion' is largely futile—futile partly because of its arbitrary and wilfully eccentric character, but partly also because the channels of expression currently accepted as permissible are so rigidly laid down that novelty can find acceptance only with the aid of violence." Emotion untempered by intelligence expresses itself in eccentricity; it is individual, whereas true art is universal.

Likewise Dewey objects to the evasion of referring art to

[1] *Art and Education*, p. 10. [2] *Art and Education*, pp. 274–5.
[3] *Art and Education*, p. 6.

the Unconscious, remarking[1]: "In the past we have had to depend mostly upon phrases to explain the production of artistic structures. They have been referred to genius or inspiration or the creative imagination. Contemporary appeal to the Unconscious and the Racial Unconscious are the same thing under a new name. Writing the word with a capital letter and putting 'the' before it, as if it were a distinct force, gives us no more light than we had before." The art productions of psychotic and neurotic patients originating in the Unconscious may have diagnostic significance, but psychiatric treatment attempts to bring the disturbing elements of the Unconscious under the patient's conscious control, and, if successful, would likewise "cure" him of his artistic proclivities!

Dewey has handicapped himself in providing an unequivocal presentation of art by his refusal to acknowledge intrinsic values. Wilenski has contended[2] that from the intrinsic value of a real work of art where the artist has been in the best sense a law unto himself, there must be distinguished another kind of value acquired by original works of art from the appreciation given to them by spectators other than the artist. Dewey can recognise only these acquired values and the instrumental functions of art; thus he maintains[3] that the eternal quality of great art "is its renewed instrumentality for further consummatory experiences" and that excellence in art "occurs when activity is productive of an object which affords continuously renewed delight". This condition requires that the object be, with its successive consequences, indefinitely instrumental to *new* satisfying events.[4] His final dismissal of purely in-

[1] *Art and Education*, p. 67.

[2] R. H. Wilenski, *The Modern Movement in Art* (London: Faber & Faber, Ltd., (Gwyer) 1927).

[3] *Art and Education*, p. 8. Also *Experience and Nature* (London: George Allen & Unwin, Ltd., 1929), p. 365.

[4] *Art and Education*, p. 7.

trinsic values is expressed in the statement that "a consummatory object that is not instrumental turns in time to the dust and ashes of boredom". Wilenski[1] counters this with the affirmation: "All original artists, I am certain, have always worked without reference to their work's effect on spectators other than themselves; and they have always assumed that their work has intrinsic value when they themselves have honestly and competently passed it as exactly the thing they have set out to do. No original artist could go on working but for this assumption, since, as we all know, the reception first afforded to original works of art by other spectators is generally in the nature of apathy, derision or abuse."

Dewey's failure is especially evident in regard to aesthetic appreciation, his analysis of this reading like a physiologist's description of the process of digestion.[2] But just as the actor has to create the part which the playwright had earlier conceived, so the critic or the spectator to assess or to appreciate adequately a work of art must in imagination recapitulate the procedure adopted by the original artist; he must recreate the work if he is to understand it fully. The same principles of explanation must then apply to artistic production and to aesthetic appreciation; the one cannot be explained philosophically and the other psychologically or physiologically.

"Religion is among the data of experience which philosophy must weave into its own scheme," says Whitehead.[3]

[1] *The Modern Movement in Art*, p. xiii.

[2] *Art and Education*, p. 69: "From the psychological standpoint this integration in pictures means that a correlative integration is effected in the total set of organic responses; eye activities arouse allied muscular activities whch in turn not merely harmonise with and support eye activities, but which in turn evoke further experiences of light and colour, and so on. Moreover, as in every adequate union of sensory and motor actions, the background of visceral, circulatory, respiratory functions is also constantly called into action. In other words, integration in the object permits and secures a corresponding integration in organic activities. Hence the peculiar well-being and rest in excitation, vitality in peace, which is characteristic of aesthetic enjoyment."

[3] *Process and Reality* (Cambridge University Press, 1929), p. 21.

Dewey ultimately came to recognise this when he produced *A Common Faith*, although in his early writings scant regard was paid to it. One of his admirers[1] even considered the neglect commendable: "I recall a morning walk with Professor William James in Berkeley but a day before he gave that famous address which introduced pragmatism officially to the world. He was fresh from theological battle with Professor Howison and was repeating its thrust and parry with his well-remembered avidity. 'But', said I, mightily impressed by two years' sitting in Professor Dewey's classroom, 'Professor Dewey does not often refer to God. He has no such familiar acquaintance with Him as your theological professors have.' 'If he does not mention God, he is no philosopher,' said Professor James."

To a philosophy of religion two approaches are possible. We can consider either the object of worship or the attitude of the worshipper. Dewey has no difficulty in disposing of both. By the expedient of eliminating the differences in religious creeds and observances he demonstrates that there is no such factor as that designated religion. This is equivalent to assuming that an object still persists after depriving it of all its qualities, or arguing that since a given thought can be linguistically expressed in a diversity of languages there is no such thing as thought. There may nevertheless be a unity *in* difference where there is no unity *apart from* the differences. Having distinguished a religion from the religious function[2] Dewey proceeds to analyse the latter. After decreeing that religion itself does not exist it is hardly philosophical to examine the religious attitude, although Dewey might have justified the procedure instrumentally.[3]

[1] Ernest Carroll Moore, *John Dewey, The Man and his Philosophy* (Harvard University Press, 1930), pp. 12–13.

[2] *A Common Faith* (Yale University Press, 1934),p. 66.

[3] p. 6: "There is no such thing as religion in the singular." P. 8: "There is no such thing as religion in general." Pp. 9–10: "In contrast the adjective 'religious' denotes nothing in the way of a specifiable entity. . . . It denotes attitudes that may be taken toward every object and every proposed end or ideal."

If Dewey, as we have said, disposed of the object of worship by abstracting from it all its qualities, he dispenses with the attitude of worship by generalising it till it is synonymous with any mental activity. Religious faith, he defines,[1] as the unification of the self through allegiance to inclusive ideal ends, which imagination presents to us and to which human will responds as worthy of controlling our desires and choices. This "does not shut up religious values within a particular compartment",[2] but it is difficult to recognise anything specific about the proposition which would distinguish it from the intellectual, the aesthetic or the ethical attitude. It is equivalent to Spinoza's *sub specie aeternitatis* or Plato's idea of the Good.

As Dewey cannot account for religion experimentally, in *The Quest for Certainty* he treats it genetically[3] and regards it as provisional, a temporary substitute for the protection now coming to be afforded by the practical arts; "as a drowning man is said to grasp at a straw so men who lacked the instruments and skills developed in later days, snatched at whatever, by any stretch of imagination, could be regarded as a source of help in time of trouble. The attention, interest and care which now go to acquiring skill in the use of appliances and to the invention of means for better services of ends were devoted to noting omens, making irrelevant prognostications, performing ritualistic ceremonies and manipulating objects possessed of magical power over natural events. In such an atmosphere primitive religion was born and fostered. Rather this atmosphere *was* the religious disposition."

The appeal to the conjectural practices of primitive man carries little weight in discussions on present-day values; in fact, the common form of the *ignotum per ignotius* fallacy in modern writers is to propound a doctrine, no matter how fantastic, and then proceed to substantiate it by some

[1] p. 33. Cf. *Human Nature and Conduct*, pp. 263–4. [2] p. 66. [3] pp. 10, 254.

hypothetical practice of primitive man. Just as when psychological explanation fails, resort is had to physiology, so when philosophical explanation fails, resort is had to anthropology. Dewey's treatment of the origin of religion exemplifies this fallacy, for it does not agree with the views of those who may be termed field anthropologists. Thus Malinowski declares[1]: "The most important lesson . . . will be that religion and science have existed from the very beginning, and that they have each occupied a different place in human activities. Each has its own task and its own province."

Religion is likewise not a mere compensation for man's sense of inferiority, affording a sense of security and comfort in the more hazardous world. Whitehead is nearer the mark when he affirms[2]: "The worship of God is not a rule of safety—it is an adventure of the spirit, a flight after the unattainable. The death of religion comes with the repression of the high hope of adventure." St. Paul counsels the Christian to equip himself with the full armour of God.

With such an interpretation of religion as a mere survival from primitive times or a compensation for man's sense of inferiority, the instrumentalist must conclude that the less said about it in education the better. This is the position adopted by Dewey, and he rationalises it in his essay on "Religion and Our Schools".[3] His argument runs that in as much as religion is universal and as we are not in a position to present to pupils a purely universal religion, we should exclude religion altogether. We need only quote the passage[4]: "We certainly cannot teach religion as an abstract essence. We have got to teach *something* as religion and that means practically *some* religion. Which? In America, at

[1] B. Malinowski, *The Listener*, vol. iv, October 1930, pp. 683–4, 716–7.
[2] *Science and the Modern World*, p. 239.
[3] *Characters and Events* (New York: Henry Holt & Co., 1929), vol. ii, bk. 3, ch. 12.
[4] *Characters and Events*, p. 510.

least, the answer cannot be summarily given even as Christianity in general. Our Jewish fellow-citizens not only have the same 'hands, organs, dimensions, senses, affections, passions' as the Christians, but like them pay taxes, vote and serve on school boards. But we should not be very much better off even if it were a question of Christianity alone. *Which* Christianity? Oriental in its origin, it has since been Latinised and Germanised, and there are even those who have dreamed of humanising it." The fallacy of this type of argument has been indicated above. Just as Dewey assumes that established principles exclude progressive developments, so here he infers that universal truths exclude particular forms. Pupils of various creeds attending the same schools present administrative difficulties which may render it inconvenient to include religious instruction in these schools, but this is no justification for denying to the child the development of the religious capacity inborn in him. Decry man's perversity in worshipping a Supreme Being as the instrumentalist will, this attitude of man existed and was recognised ages before instrumentalism was elaborated and will persist long after instrumentalism has become merely a historical curiosity, for it expresses a unique feature in human nature which the religious man realises cannot be gratified by seeking safety or by success in any other province.

By reason of the intimate interaction between Dewey's philosophical and his educational doctrines, instanced in our first chapter, it can readily be inferred that experiment would be equally conspicuous in both. In education its novelty evokes enthusiasm occasioning misconceptions against which Dewey repeatedly inveighed. Experiment is a directed and controlled procedure, he warns his too ardent disciples, not a mere aimless activity or random trial-and-error. In *How We Think* he protests[1]: "In some 'progressive

[1] p. 188.

schools' continual outward activity even though of a somewhat random and disconnected character, is treated as if it were experimentation. In truth, every genuine experiment involves a problem in which some thing must be found out and where overt action must be guided by an idea used as a working hypothesis so as to give action, purpose and point." Activity indeed to have any educational significance must, while providing subjective satisfaction, also produce something possessing objective worth. An education which represses or thwarts the child's inclinations will lead to the creation of complexes. The child may, however, pass his time in aimless dawdling and solve his problems in day-dreaming, and this may equally induce neuroses. Unless the activity does something more than minister to Freud's pleasure principle it cannot be regarded as educative. Fantasy must be controlled until it becomes disciplined thinking; it then not only satisfies the individual's needs but also serves as a universal force contributing to the solution of the world's problems.

Dewey likewise repudiates the idea that a purely haphazard, makeshift arrangement resulting in a hand-to-mouth existence can be equated to the experimental procedure. Thus he says[1]: "Improvisation that takes advantage of special occasions prevents teaching and learning from being stereotyped and dead. But the basic material of study cannot be picked up in a cursory manner. Occasions which are not and cannot be foreseen are bound to arise whenever there is intellectual freedom. They should be utilised. But there is a decided difference between using them in the development of a continuing line of activity and trusting to them to provide the chief material of learning." And he reiterates[2]: "Unless the science of education on its own ground and behalf emphasises *subject-matters* which contain

[1] *Experience and Education* (New York: The Macmillan Co., 1938), p. 96.
[2] *Problems of Men*, p. 168.

within themselves the promise and power of continuous growth in the direction of organisation, it is false to its own position as scientific." The need for continuity in experiments was foreseen by Rousseau who, regarding the projects which he proposed for Émile, advises[1]: "Take care that all the experiments are connected together by some chain of reasoning, so that they may follow an orderly sequence in the mind, . . . for it is very difficult to remember isolated facts or arguments, when there is no cue for recall."

In his early days, when still influenced by the Herbartian tradition, Dewey found the guiding principle of continuity in the recapitulation principle, not, however, in the culture-epoch doctrine of the Herbartians but in the evolution of occupations. Recapitulation is nevertheless inconsistent with the experimental procedure,[2] which implies that we should deal with the present situation, should begin at the point where the child is at rather than from where mankind is supposed to have set out. The technical definition of education which Dewey gives, is accordingly[3]: "That reconstruction and reorganisation of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience." Such reconstruction of experience, as Dewey in an earlier passage indicates,[4] must be deliberately regulated with reference to its educative effect by selecting, simplifying and grading the features capable of being responded to by pupils, eliminating the undesirable features and securing a balanced environment.

The experimental method does not eliminate the need for guidance by the teacher. Dewey does not admit that leaving

[1] *Émile*, Everyman edition, p. 140.

[2] Cf. *Essays in Honour of John Dewey* (New York: Henry Holt & Co., 1929). "A Pragmatic Critique of the Historico-Genetic Method," by Sidney Hook, pp. 156–7: "Knowledge of the present is the key to the understanding of the past."

[3] *Democracy and Education*, pp. 89–90. Cf. Edward Caird, *Essays on Literature and Philosophy* (Glasgow: James Maclehose & Sons, 1892), vol. i, p. 209. "The Problem of Philosophy at the Present Time," 1881: "Philosophy may be described as a critical reconstruction of belief."

[4] *Democracy and Education*, pp. 23–7.

the child to his own devices is adequate nor does he believe merely in consecrating children's whims. In *The Dewey School*[1] the position is stated thus: "The hypothesis was that freedom to express in action is a necessary condition of growth, but that guidance of such experience is an equally necessary condition, especially of the child's freedom." Guidance, it may be remarked, need not detract from originality; it may inspire and encourage pupils. Many distinguished people have freely admitted their indebtedness to their schoolmasters. As Dewey in *Education and Art*[2] elaborates: "There is a present tendency in so-called advanced schools of educational thought . . . to say in effect, let us surround pupils with certain materials, tools, appliances, etc., and then let pupils respond to these things according to their own desires. Above all, let us not suggest any end or plan to the students; let us not suggest to them what they shall do, for that is an unwarranted trespass upon their sacred intellectual individuality since the essence of such individuality is to set up ends and means. Now such a method is really stupid. For it attempts the impossible, which is always stupid, and it misconceives the conditions of independent thinking. There are a multitude of ways of reacting to surrounding conditions, and without some guidance from experience these reactions are almost sure to be casual, sporadic and ultimately fatiguing, accompanied by nervous strain; since the teacher has presumably a greater background of experience, there is the same presumption of the right of a teacher to make suggestions as to what to do, as there is on the part of the head carpenter to suggest to apprentices something of what they are to do."

Were the curriculum to be restricted to what is verifiable by experiment, much of the experience that the race has acquired, although it may have been only by trial and error,

[1] New York: D. Appleton Century Co., 1936, p. vi. Cf. *Democracy and Education*, ch. 3.
[2] p. 180.

together with all that is conserved in books, would have to be by-passed. This would doubtless not appal the stricter set of the Deweyites. W. H. Kilpatrick, the great expositor of Dewey's philosophy to the American teachers, by hyphenating terms like subject-matter-set-out-to-be-learned, and dictation-of-subject-matter-from-above in his *Remaking the Curriculum*[1] disparages all transmitted experience. Dewey himself does not countenance this rejection, conceding, perhaps somewhat grudgingly, the significance of book knowledge. "For only in fusion with book-material does what is immediately present take on scientific status."[2]

By its efforts to gain recognition for modern technological advances in the educational curriculum and of the experimental procedure in educational method instrumentalism or experimentalism has complemented the traditional education, but by the neglect of certain factors in experience and its undue emphasis on others it manifestly fails to serve as an adequate philosophic basis of education.

[1] New York: Newsom & Company, 1936.
[2] *Problems of Men*, p. 290.

CHAPTER VII

Idealism

"IDEALISM in one form or other", says Adams,[1] "permeates the whole of the history of philosophy." In education Comenius[2] has been regarded as one of its earliest exponents, but it doubtless originated with Socrates, and is clearly evident in the writings of Plato. There are two things which, according to Aristotle,[3] we may fairly attribute to Socrates —his inductive discourses and his universal definitions. His inductive discourses constituted the method by which Socrates sought to arrive at the universal; in Plato's *Republic* the latter is referred to as "the method of mutual admissions",[4] and the most characteristic feature of the method was the need for a companion in the search for truth. Thus in the *Protagoras*[5] Socrates is represented as saying that when anyone apprehends alone, he immediately goes about and searches for someone to whom he may communicate his thought and with whom he may establish it. This is no mere accidental circumstance in the method of Socrates; it is the essence of the method; it is the external form or manifestation of the fact that truth is universal. Thus in the *Gorgias*[6] Socrates says: "I consider I shall have proved nothing unless I make you yourself the one willing witness of my words; neither will you, unless you have me as the one witness of yours, no matter about the rest of the world." This universality of truth, as against the sophistic and pragmatic view that each man can be a law unto himself, is a

[1] *The Evolution of Educational Theory* (Macmillan & Co., Ltd., 1912), p. 284.
[2] W. Boyd, *The History of Western Education* (London: A. & C. Black, 1921), pp. 262–3.
[3] *Metaphysics*, 1078, 6. [4] § 348. [5] § 348. [6] §472.

distinctive tenet of idealism. Another feature of the method of Socrates was that he was always saying the same things about the same things, and he was twitted by Hippias with this[1]: "What, still repeating the same old talk, Socrates, which I used to hear from you long ago?" "Yes," retorted Socrates, "and what is still more strange, Hippias, it is not only the same old talk, but about the same old subjects. Now you, I dare say, through versatility of knowledge, never say the same thing twice over on the same subject." Here in naïve form we have an assertion of the timelessness of certain truths, a characteristic alluded to in our criticism of pragmatism.

In addition to the innovations which Aristotle attributed to Socrates there was a third and greater with which Socrates might be credited, but which Plato and Aristotle, standing in the same succession, would fail to observe and record, namely, the initiation of idealism in philosophy. Socrates did not, like modern philosophers, take all knowledge for his province; faced with the alternative of making man or nature his starting-point, he chose the former, and in doing so was the first to draw the distinction between science and philosophy, and to establish idealism. "In contrast to others," Xenophon says,[2] "he set his face against all discussion of such high matters as the nature of the universe," and in the *Apology*[3] Socrates is reported as saying: "The simple truth is that I have nothing to do with physical speculation." The proper business of mankind is man, he assumed. "Did these investigators [of nature]", he asked,[4] "feel their knowledge of things human so complete that they betook themselves to these lofty speculations? Or did they maintain that they were playing their proper parts in thus neglecting the affairs of man to speculate on the concerns of God?"

[1] Xenophon, *Memorabilia*, IV, iv, §§ 4–6.
[2] *Memorabilia*, I, i, § 11.
[3] § 19. Cf. *Phaedo*, § 96.
[4] *Memorabilia*, I, i.

If we could completely account for Socrates thus turning away from nature, we should have the key to his philosophy. The inadequacy of the results which the study of nature affords can hardly be held to account for his conversion. Indeed, the step which he took is just the very reverse of that which the modern mind would take; it is to the uniform working of nature that we turn to find a field where there is some hope of a harvest, not to the capricious acts of mortal man, and even when Wordsworth apostrophises duty, it is to the heavens that he goes for its highest exemplification:

> Thou dost preserve the Stars from wrong;
> And the most ancient Heavens, through Thee, are fresh and strong.

Only in one passage,[1] or at most in two, if a passage in the *Phaedo* is ascribed to him, did Socrates express views on the system of nature. From these it is evident, as Caird has indicated, that had he attempted to construct a natural philosophy, he would have adopted the teleological view of things in which God would have been conceived as a designer working with a conscious purpose to realise an end, and that end the happiness of his creatures, especially man. Now a mind given to seek for a teleological explanation of things must soon turn away in dissatisfaction from the merely mechanical explanations which are all that science can offer. Such a trend of mind might thus account for Socrates turning to ethics, for he would naturally be led to suppose that all things were disposed to contribute to the happiness of man. Socrates thus constantly sought to determine the purpose, end or function of a thing.[2] Thus in the

[1] *Memorabilia*, I, iv, §§ 2–8. Cf. E. Caird, *The Evolution of Theology in the Greek Philosophers* (Glasgow: J. Maclehose & Sons, 1904), vol. i, pp. 65–6.

[2] Schiller, *Studies in Humanism* (Macmillan & Co., Ltd., 1907), pp. 54–5, argues that the exact meaning of Plato's Idea of Good is the "concept of end", "the postulate of a complete teleological explanation of the universe".

Lysis[1] he is represented as declaring: "Although we may often say that gold and silver are highly valued by us, that is not the truth; for there is a further object, whatever it might be, which we value most of all, and for the sake of which gold and all other possessions are acquired by us. . . . And may not the same be said of a friend? That which is only dear to us for the sake of something else is improperly said to be dear, but the truly dear is that in which all these so-called friendships terminate." Again in the *Euthydemus*[2]: "And if we knew how to convert stones into gold, the knowledge would be of no value to us, unless we knew how to use the gold." In the *Symposium*[3] Socrates, when asked, "What does he gain who possesses the good?" replied "Happiness", the reason being annexed: "Nor is there any need to ask why a man desires happiness; the answer is already final." The teleological trend of Socrates's mind may thus account for the restriction of his inquiries to things human, and the more he concerned himself with ethical topics the more would he be repelled from science as indifferent to, if not, as Huxley in modern times has maintained, adverse to the development of morality. The teleological outlook was likewise the determining factor of his idealism.

Plato's idealism reflects its Socratic origin. There is at once the emphasis on, and precedence of, the universal, the permanent, to the neglect and rejection of the actual and temporary. For Plato the things that are seen are temporal, the things that are unseen are eternal. His "Ideas" are "the divine originals",[4] and experience of these constitutes science or knowledge, whereas those who cannot apprehend principles apart from their concrete embodiments, live in what Plato calls "a dreaming state"; their acquaintance with things only ranks as "opinion"; they apprehend the actual, they do not comprehend the real. Plato maintains that

[1] § 220. [2] § 289. [3] § 204. [4] *Republic*, § 500.

opinion is appointed to one sphere and science to another.[1] He exaggerates the distinction between the spheres of knowledge and of opinion, and even asserts[2] that his premises "make it impossible to identify the object-matter of science and that of opinion". This dualism vitiates almost every aspect of Plato's philosophy. It is inherited from Socrates, who, to find the ultimate purpose of existence, turned away from nature, unlike the modern idealist, who seeks to find in a deeper interpretation of nature the true significance of reality. This dualism is the source of the popular belief that anything "idealistic" must be remote from the realities of life.

In accordance with this view the education of the philosopher in Plato's *Republic* does not consist in a mere extension of knowledge, a further development of experience, but, according to the simile of the cave,[3] it demands a complete inversion of attitude or reorientation of mind. "Our present argument shows that there is a faculty residing in the soul of each person, and an instrument enabling each of us to learn, and that just as we might suppose it to be impossible to turn the eye round from darkness to light without turning the whole body, so must this faculty, or this instrument, be wheeled round, in company with the entire soul, from the perishing world, until it be enabled to endure the contemplation of the real world and the brightest part thereof, which, according to us, is the Form of the Good."[4] In selecting subjects for inclusion in the philosopher's curriculum Plato dismisses as inadequate music and gymnastic, which constituted the curriculum of the guardian class, because these subjects are engaged upon the changeable, whereas the sciences he is in search of must deal with the real;[5] they must be "of universal application" and at the same time "lead to reflection"—the former re-

[1] *Republic*, § 477. [2] *Republic*, § 478. [3] *Republic*, bk. vii.
[4] *Republic*, § 518. [5] *Republic*, § 522.

quirement recalling the Socratic definitions, and the latter recognising the existence of "objects of a higher order" in addition to the objects of perception. The curriculum which Plato arrived at comprised number, geometry, astronomy, harmonics, all preparatory to metaphysics. It is not so much the subjects selected as the reasons that he gives for them, that disclose the inadequacy of his idealism, although in dismissing the manual arts as degrading[1] he reveals his aristocratic and exclusive caste of mind. Number is to be studied not with a view to buying and selling, but for the purposes of war, and to facilitate the conversion of the soul itself from the changeable to the true and the real,[2] and it is in this connection that he introduces the formal training argument.[3] Geometry is likewise recommended because it facilitates our contemplation of the essential Form of the Good. In regard to astronomy he says:[4] "We shall pursue astronomy with the help of problems, just as we pursue geometry: but we shall let the heavenly bodies alone, if it is our design to become really acquainted with astronomy, and by that means to convert the natural intelligence of the soul from a useless into a useful possession." It is in recommending the study of the mathematical bases of music that he speaks of it as "a work useful in the search after the beautiful and the good, though useless if pursued with other ends". These subjects form but the prelude to the study of dialectic, "the coping-stone" of the sciences; and the special training in dialectical reasoning is necessary for the complete philosopher to enable him to grasp "by pure intelligence" "the real nature of the Good".[5]

Not only is the education of the philosophers who are to be rulers in his ideal state one-sided, but Plato's scheme of higher education is restricted to this one class in the com-

[1] *Republic*, § 522. [2] *Republic*, § 525.
[3] For discussion of Plato's responsibility in this connection see the writer's *The Doctrines of the Great Educators* (Macmillan & Co., Ltd., 1954).
[4] *Republic*, § 529. [5] *Republic*, § 532.

munity; the guardians receive only the general education in music and gymnastic, and the artisans who were allowed no share in the government of the state have to be content with what might be designated a premature vocational training[1] or with no education at all. This restriction of the benefits of education to the governing class is typical of ancient education, as contrasted with modern education which is democratic and has taken upon itself the more difficult task of devising an education for "all the children of all the people". By its exclusion of the artisans from participating in its government, Plato's state must be refused the designation "ideal"; as Newman has expressed it[2]: "The best state is that which is all gold, not that which is tipped with gold. . . . 'Ten just men' do not make a good State, any more than one swallow makes a summer. The secret of a State's excellence lies in the fact of its consisting of a large body of excellent citizens organised aright. Plato had sacrificed much that makes life worth having without realising in any one of the three sections of his State the most desirable life." Plato, the great idealist, was thus not idealistic enough.

Although Aristotle is the best critic of, and commentator on, Plato, it must be remarked that he is first and above all the disciple of Plato. The points of agreement are, if not greater in number, at least more important than the points of difference. As Newman remarks[3]: "It was a fortunate circumstance that Plato's philosophical inheritance passed to a successor sufficiently at one with him to maintain the continuity of speculation, and sufficiently independent to give a fresh impulse and direction to inquiry." Thus Aristotle is, like Socrates and Plato, an idealist, but, dominated by biological rather than metaphysical categories, his writings do not exhibit the sharp contrast and strong

[1] *Republic*, § 467. Cf. also *Laws*, § 643.

[2] W. L. Newman, *The Politics of Aristotle* (Oxford University Press, 1887), vol. i, p. 428.

[3] *The Politics of Aristotle*, vol. i, p. 461.

oppositions encountered in Plato. His political philosophy is in some respect more ideal than Plato's, while being also more practical, for he does not regard the rulers and the ruled as belonging to two distinct classes in the community, but assumes that the latter in their turn with age and education will succeed to the duties of rulers. The good citizen should know how to govern like a freeman, and how to obey like a freeman—these are the virtues of a citizen.[1] While asserting the importance of a liberal education, he does not betray the fear of the practical subjects that Plato does. Thus he maintains[2] that children should be taught the useful things which are really necessary, but without vulgarising them. "In his view", according to Newman,[3] "the object of youthful education is to produce a being who will find his happiness in the exercise of the moral and intellectual virtues—to whom not only vice, but an over-estimate of external and bodily goods, will be distasteful—who will live for the noblest things that men can live for, simply because to do otherwise would be painful to him." The ideal of a liberal education thus portrayed has remained a characteristic feature of idealistic education.

The idealistic aspect of the philosophy of Plato and Aristotle was adopted by Stoicism, "the greatest system of organised thought which the mind of man has built up for itself in the Graeco-Roman world before the coming of Christianity with its inspired book and its authoritative revelation".[4] In opposition to the Epicurean view that to be conscious that one's maxims lead to happiness is virtue, the Stoics maintained that nothing is worth living for except goodness, and goodness the later Stoics—following Socrates, Plato and Aristotle—defined as performing one's function well, or living according to nature. Living according to

[1] *Politics*, III, iv, § 15 [2] *Politics*, VIII, ii, § 3.
[3] *The Politics of Aristotle*, vol. i, p. 373.
[4] Gilbert Murray, *The Stoic Philosophy* (London: Watts & Co., 1915), p. 14.

nature means working with nature in her eternal effort towards perfection. "It does not mean 'living simply' or 'living like a natural man'. It means living according to the spirit which makes the world grow and progress."[1] This view we find in later educationists who must be classed as idealists; it also serves as a warning against too hurriedly dismissing as "naturalists" all who counsel us to live "according to nature".

Stoicism served as a religion as well as a philosophy; it gave man armour when the world was predominantly evil, and it encouraged him forward when the world was predominantly good.[2] It thus preserved the idealistic tradition till this tradition was finally established by Christianity. The Christian view of life is unequivocally idealistic, personality —the fatherhood of God and the divine sonship of Jesus Christ—being its highest category, although by its depreciation of the world and the flesh, it at times became almost dualistic. So pronouncedly idealistic, however, are the doctrines of all schools of Christian thought that it becomes quite unnecessary to exhibit or elaborate the idealistic trend in their educational schemes.

Modern idealism culminated in the German movement of the early nineteenth century, and education could not remain uninfluenced by this great intellectual revolution which paralleled the social and political upheaval of the French revolution.[3] These two revolutions had a common origin; "in German idealism the patient suffering of generations raises its voice", says a German writer.[4] The cure for

[1] Pp. 32–4. Cf. Seneca, *Epistulae Morales*, cxviii: "How, then, can the Good be recognised? Only if it is completely according to nature."

[2] Cf. G. Murray, *The Stoic Philosophy*, pp. 49–50.

[3] German idealism has been stated by Heine to be the offspring of the Reformation. *Religion and Philosophy in Germany*, translated by J. Snodgrass (London: Trübner & Co., 1882), p. 59. In his *Addresses to the German Nation* (Chicago and London, The Open Court Publishing Co., 1922), vi, Fichte connects the Reformation, Modern Idealism and the French Revolution.

[4] Gertrude Bäumer, *Fichte und sein Werk* (Berlin: F. A. Herbig, 1921), p. 10.

such discontent was a new conception of individual and social morality, a new conception of the individual's worth and of the constitution of the state. Kant provided the metaphysical basis of the new morality. His problem originated on the intellectual side. It was set by the bankruptcy of English empiricism expressed in Hume's candid confession: "All my hopes vanish when I come to explain the principles that unite our successive perceptions in our thought or consciousness. I cannot discover any theory which gives me satisfaction on this head. In short there are two principles which I cannot render consistent; nor is it in my power to renounce either of them, namely, that all our distinct perceptions are distinct existences, and that the mind never perceives any real connection among distinct existences. Did our perceptions either inhere in something simple and individual, or did the mind perceive some real connection among them, there would be no difficulty in the case."[1] In more general form the problem was set originally by Locke who, in his *Essay Concerning the Human Understanding*, proposed "an examination of our abilities to ascertain what objects our understandings are, or are not, fitted to deal with".[2] Kant's answer, evolved on metaphysical lines, is similar to that arrived at by modern psychology from its own standpoint, namely, the correlation of the mind and the world it knows, or the reciprocal relationship of the individual's endowment and his environment. But a theory of knowledge or even a theory of reality based on a purely metaphysical speculation would not have moved the world, had it not had some bearing on the moral, religious and political life of mankind.

If English empiricism set the problem to German idealism, French romanticism in the person of Rousseau suggested the answer. Not in society, Rousseau taught, was the individual to find the sanctions of morality, but in his own nature.

[1] Appendix to *Treatise of Human Nature*. [2] "Epistle to the Reader".

His freedom was to be found in being true to his own self. Kant likewise based freedom on man's inner nature. Rousseau's thesis was to preserve the individual's freedom in a society dominated by conventionality, Kant's to save man's freedom in a natural world determined by causality.

It may appear somewhat paradoxical to attribute the origin of German idealism to Rousseau,[1] who is not infrequently classed as a naturalist, but Rousseau's doctrine is not in the philosophical sense naturalistic. Nature for him is not opposed to reason or spirit, but to convention, typified by society as he conceived it. Like modern idealists, he seeks to do justice to nature, and to give it its rightful place in the scheme of things; he does not, however, regard nature as the whole of, and ultimate form of, reality, but recognises the existence of a moral order[2] in which reason and conscience are the controlling factors, and a spiritual order which embraces and explains the natural order: "The Incomprehensible embraces all, he gives its motion to the earth, and shapes the system of all creatures, but our eyes cannot see him nor can our hands search him out, he evades the efforts of our senses; we behold the work, but the workman is hidden from our eyes."[3] And to the question where this Being is to be found existing, Rousseau replies: "Not merely in the revolving heavens, nor in the sun which gives

[1] In his *Doctrines of the Great Educators* the writer has also contended that in the *Émile* Rousseau was expounding a universal system of education and that the introduction of a specific pupil was merely an expository device; that the *Émile*, if it did not originate the democratic tendency in Education—that was done by Comenius in his *Great Didactic*—at least reinforced it to such a degree that it has become an accepted tenet in modern education. This view of Rousseau removes the difficulty of explaining how the idealistic and democratic systems of Pestalozzi and later writers originated in the *Émile*.

[2] Cf. *Émile*, Everyman translation, p. 196: "We have reached the moral order at last."

[3] *Émile*, p. 218. Cf. on this conception Heine, *Religion and Philosophy in Germany* (Trübner & Co., 1882), p. 74: "The Hebrews conceive God as a tyrant armed with thunder; Christians, as a living Father; the disciples of Rousseau and the whole Genevese school regard him as a skilful artist, who has fashioned the world somewhat as their fathers constructed watches, and as experienced critics they admire the work and praise the celestial workman."

us light, nor in myself alone, but in the sheep that grazes, the bird that flies, the stone that falls, and the leaf blown by the winds."[1] In the "Creed of the Savoyard Priest"[2] he contends specifically against materialism, his objection being that it fails to account for the origin of the motion of the atoms.

As already suggested, the ethics of a system is the touchstone by which to decide whether a writer is naturalistic in the philosophical sense, the ethical doctrine typical of naturalism being hedonism. Rousseau is undoubtedly not a hedonist; he clearly recognises the distinction between pleasure and happiness, putting into the mouth of Julie in *La Nouvelle Héloïse* the words, "we have sought pleasure and happiness has fled from us", and in the *Émile*[3] saying, "the nearer we are to pleasure, the further we are from happiness". It is nevertheless the case that in the moral training of Émile Rousseau advocates that Émile should be subjected to the discipline by natural consequences, but this doctrine, as we have already indicated, he restricts to the negative or preventive stage of moral education, the later positive stage comprising indirect moral instruction in the form of fables, historical biographies, and direct moral instruction on economic and sex relations. Of Rousseau, indeed, even more truly than of Herbart, it might be said that he made morality the end of education.

By temperament Rousseau was condemned to be an idealist.[4] A modern school of psychology classifies individuals into two types, the "introvertive" and the "extrovertive". To the former class Rousseau undoubtedly belongs. Psychopathology could doubtless reveal the cause, and the physical disability—after Frederika Macdonald's study[5]—

[1] *Émile*, p. 237. [2] Cf. pp. 228–78. [3] p. 44. Cf. p. 140.

[4] Adams, *The Evolution of Educational Theory* (p. 252), says of Rousseau: "His whole theory of education . . . was in all probability in its origin nothing more than the reaction of his temperament on the surroundings."

[5] *Jean Jacques Rousseau: A New Criticism* (London: Chapman & Hall, 1906).

could be hazarded. The latter may account for Rousseau's hostility to society which from this standpoint is something of the nature of a defence mechanism. The introvert, failing to adjust himself satisfactorily to external reality, seeks to adjust reality to his method of conceiving it. He is a subjective idealist of the extremest sort, and his attitude is not theoretical but pathological.[1] The introvert has thus, from the psychological and individualistic standpoint, the same orientation as the objective idealist from the metaphysical and universal standpoint. Both would mould the world nearer to the heart's desire, but while the introvert would do this only partially and to suit his own selfish ends, the idealist would not rest content till he had reinterpreted the whole universe in accordance with the laws of his true universal nature. Rousseau, too, it may be remarked, restricts his railing to the social aspect of reality, and does not extend it to the physical aspect. He is prepared to conform himself and his pupil, Émile, to the natural law, but would fain subordinate the social order to his own fancies. This he admits in the *Confessions* when he says: "I would love society as much as any man, were I not certain to exhibit myself in it, not only disadvantageously, but totally different from what I really am."[2] Later in the same work[3] he explains at greater length: "Thrown into the world in despite of myself, without having its manners, or being in a situation to adopt and conform myself to them, I took it into my head to adopt others of my own, to enable me to dispense with those of society. My foolish timidity, which I could not conquer, having for principle the fear of being wanting in the common forms, I took, by way of encouraging myself, a resolution to tread them underfoot. I became

[1] Cf. Rousseau's *Confessions*, bk. ix: "The impossibility of attaining real beings threw me into the region of chimera, and seeing nothing in existence worthy of my delirium, I sought food for it in the ideal world, which my creative imagination quickly peopled with beings after my own heart."

[2] Bk. iii. [3] Bk. viii.

sour and a cynic for shame, and affected to despise the politeness which I knew not how to practise. This austerity, conformable to my new principles, I must confess, seemed to ennoble itself in my mind; it assumed in my eyes the intrepidity of virtue, and I dare assert it to be upon this noble basis that it supported itself longer and better than could have been expected from anything so contrary to my nature." The blame he, of course, throws on society: "If I have a dislike for the society of mankind, it is more their fault than mine,"[1] although the error of this procedure he rightly diagnoses and denounces in the case of those who rail against nature: "Mad men, who continually cry out against nature! Know that all your evils proceed from yourselves."[2]

When we trace the source of Rousseau's anti-social bias and of his return to nature as the cure for all the world's troubles, which are merely the obverse and converse sides of the same principle, we are confirmed in our view that Rousseau's standpoint is idealistic. The anti-social attitude was assumed by Rousseau in his early *Discourse on the Arts and Sciences*, and its origin has occasioned much controversy. Kant, however, in his essay *On the Bad Principle in Human Nature*,[3] regards this standpoint as common to Seneca and Rousseau, thus affording a clue to the origin of Rousseau's attitude and thereby indicating the possible source of the material of Rousseau's *Discourse*.

In the *Émile* Rousseau makes a passing reference to Seneca's letter,[4] "On Liberal and Vocational Studies". A liberal study, according to Seneca, was a study that made man free, and this idea of freedom in education was adopted by Rousseau and may be regarded as the keynote of the *Émile*. But it is from Letter XC—"On the Part Played by

[1] *Confessions*, bk. v. [2] Bk. viii.

[3] *Kant's Critique of Practical Reason, and Other Works on the Theory of Ethics.* Translated by T. K. Abbott (London: Longmans, Green & Co., 1883).

[4] *Epistulae Morales*, LXXX, viii.

Philosophy in the Progress of Man"—that Rousseau derived the inspiration for his *Discourse on the Arts and Sciences.* Seneca therein argues that nature suffices for what she demands, whereas luxury has turned her back upon nature. "A thatched roof", he says, "once covered free men; under marble and gold dwells slavery." "Follow nature", he advises, "and you will need no skilled craftsmen." Of the contrivances of civilisation he declares: "Reason did devise all these things, but it was not right reason. It was man, but not the wise man that discovered them." The analogy between Seneca's Letter and Rousseau's Discourse is so close as to justify us in inferring that the latter was derived from the former.[1] Locke, in *Some Thoughts concerning Education*, makes repeated references to Seneca, and it is not unreasonable to suppose that it was through his study of Locke that Rousseau was directed to Seneca's writings.[2]

The Stoic attitude to nature and man is analogous to that of Rousseau, and while the Stoics advocated living according to nature and based morality upon the laws of the world as a whole, they were yet, as we have already seen, not naturalists, for, as Sorley explains,[3] "the world was interpreted as a rational or divine order. For them, nature, reason and God had the same meaning; and the moral law could be described with equal accuracy, as the law of nature, or the law of reason, or the law of God." For Rousseau the voice of conscience is likewise the voice of

[1] The avoidance of the subject actually set for the prize essay and the line of treatment adopted by Rousseau reinforce the contention made above. Rousseau had attained facility in reading Latin authors (*Confessions*, bk. vi); French translations of Seneca were, however, also available.

[2] On the specific question discussed in Seneca's *Letter* and Rousseau's *Discourse* Kant agrees with the position adopted by both these writers. Cf. "Rousseau was perhaps not so far wrong as it has been supposed, when he preferred the savage state to the state of civilisation"—quoted by E. Caird, *Critical Philosophy of Kant* (Glasgow: James Maclehose & Sons, 1889), vol. ii, p. 552. Also Kant's *Lectures on Education*: "It is still a question whether we should not be happier in an uncivilised condition."

[3] W. R. Sorley, *The Ethics of Naturalism* (Edinburgh: Wm. Blackwood, 1885), pp. 188–9.

reason and nature. "Let us obey the call of nature," he says[1]; "we shall see that her yoke is easy and that when we give heed to her voice we find a joy in the answer of a good conscience." Earlier in the *Émile*[2] he had affirmed that "reason alone teaches us to know good and evil", and had there explained: "Therefore conscience, which makes us love the one and hate the other, though it is independent of reason, cannot develop without it." Rousseau can thus be aligned with Seneca on the one side and, as we shall see, with Kant on the other.

Rousseau's general attitude may be inferred from a separate consideration of his views on nature, man and society. All the virtues which he could deny to man as a member of society and of which his primitive man had no need, Rousseau unhesitatingly ascribes to nature; thus, "all that comes from her will be true".[3] Not only so, but it is also good. "God makes all things good", he says in the *Émile*,[4] and "whatever is, is good".[5] Man's endowment, being natural, must likewise be good. Locke had maintained that the mind, instead of being by nature evil and desperately wicked, was a *tabula rasa*: Rousseau goes beyond this, and maintains that the first impulses of nature are always right; there is no original sin in the human heart, the how and the why of the entrance of every vice can be traced.[6] Dealing with the education of Sophie he repeats that all our natural inclinations are right. Fichte, in his *Addresses to the German Nation*,[7] has asserted that it is an absurd slander on human nature to say that man is born a sinner, and Froebel, in *The Education of Man*, regards as treason to human nature the modern view that the endowment of the child is non-moral, claiming "surely the nature of man is itself good". In his work *On the Bad Principle in Human Nature* Kant refers to

[1] *Émile*, p. 251. [2] p. 34.
[3] *The Social Contract and Other Discourses*, Everyman translation, "The Origin of Inequality", p. 176.
[4] p. 5. [5] p. 334. [6] *Émile*, p. 56. [7] English translation, p. 179.

this view, suggesting that it is probably a good-natured hypothesis of moralists from Seneca to Rousseau designed to urge man to the unwearied cultivation of the germ of good that perhaps lies in us, if one can reckon on a natural foundation for it in man.[1] For Kant himself, man is by nature neither good nor bad; he is free, and goodness or badness is a consequence of the exercise of his freedom; as Caird explains[2]: "Kant cannot admit that moral evil or moral good are to be referred to anything which lies beyond the individual will." This is the position adopted by Hegel[3]: "By nature the child is neither good nor bad, since it is born with no knowledge of either good or evil." The conception that the child is by nature good, adopted by Rousseau, Fichte and Froebel, is nevertheless the warrant for the freedom of the child in some modern developments of educational practice.

Rousseau's view of political society and institutions was evidently a generalisation from his own unfortunate experience. As he explains in the *Confessions*[4]: "The justice and inutility of my complaints left in my mind seeds of indignation against our foolish civil institutions, by which the true welfare of the public and pure justice are always sacrificed to I know not what appearance of order, in reality destructive of order, which does nothing more than add the sanctions of public authority to the oppressions of the weak and the iniquity of the powerful." This view of society he expresses in general form in *The Origin of Inequality*[5]: "Such was, or may well have been, the origin of society and law, which bound new fetters on the poor, and gave new powers to the rich; which irretrievably destroyed natural

[1] Kant's *Critique of Practical Reason and Other Works on the Theory of Ethics*, translation by Abbott, p. 326.

[2] *The Critical Philosophy of Kant*, vol. ii, p. 596. Cf. A. Churton, *Kant on Education* (London: Kegan Paul, 1899), p. 108.

[3] F. L. Luqueer, *Hegel as Educator* (New York: The Macmillan Co., 1896), pp. 122–3.

[4] Bk. viii. [5] p. 221.

liberty, eternally fixed the law of property and inequality, converted clever usurpation into unalterable right, and, for the advantage of a few ambitious individuals, subjected all mankind to perpetual labour, slavery and wretchedness." In an ideal condition of affairs there would be no opposition between nature and society; this Rousseau recognises in the *Émile*, where he writes[1]: "If there is any cure for this social evil, it is to be found in the substitution of law for the individual, in arming the general will with a real strength beyond the power of any individual will. If the laws of nations, like the laws of nature, could never be broken by any human power, dependence on men would become dependence on things; all the advantages of a state of nature would be combined with all the advantages of social life in the commonwealth. The liberty which preserves a man from vice would be united with the morality which raises him to virtue." This approximates to Kant's view which Caird expresses thus[2]: "The freedom that struggles against social necessity, must ultimately discover that it is only in the social organism that the individual can be really free."

Specific comparisons between the views of Rousseau and Kant can readily be instituted. Thus Kant's dualism—the phenomenal or scientific world characterised by necessity, the noumenal or ethical world by freedom—is formulated by Rousseau in *The Origin of Inequality*[3] in the following terms: "It is not so much the understanding that constitutes the specific difference between the man and the brute, as the human quality of free-agency. Nature lays her commands on every animal, and the brute obeys her voice. Man receives the same impulsion but at the same time knows himself at liberty to acquiesce or resist: and it is particularly in his consciousness of this liberty that the spirituality of his

[1] p. 49.
[2] *The Critical Philosophy of Kant*, vol. ii, p. 561. Cf. Hegel, *The Philosophy of Right*, translated by S. W. Dyde (London: George Bell & Sons, 1896), p. 163.
[3] p. 184.

soul is displayed. For physics may explain, in some measure, the mechanism of the senses and the formation of ideas; but in the power of willing or rather of choosing, and in the feeling of this power, nothing is to be found but acts which are purely spiritual and wholly inexplicable by the laws of mechanism." Kant's test of the moral rightness of an action was that it could be universalised; Rousseau expresses the same idea when he says[1] that every man is virtuous when his particular will is in all things conformable to the general will, and we voluntarily will what is willed by those whom we love. That respect for the pure form of the law is the only right motive to moral action, as Kant maintains, is implied in the statement in the *Émile*[2] that a good action is only morally good when it is done as such and not because of others. Referring to political rather than to moral action, Rousseau expresses the same principle in the words[3]: "The first of all laws is to respect the laws; the severity of penalties is only a vain resource, invented by little minds in order to substitute terror for that respect which they have no means of obtaining." Kant's fear that impulse, appetite or desire might enter into and contaminate the goodness of the purely moral act might have found expression in Rousseau's statement[4]: "The mere impulse of appetite is slavery, while obedience to a law which we prescribe to ourselves is liberty." Kant connects virtue with happiness rather than with pleasure, and would approve of Rousseau's statement, quoted earlier, that the nearer we are to pleasure, the further we are from happiness.

The most systematic statement of Rousseau's philosophical position is to be found in the "Creed of the Savoyard Priest" set forth in the *Émile*,[5] and although Rousseau does not adopt the method of rigorous metaphysical

[1] *The Social Contract and Other Discourses*, "Discourse on Political Economy," p. 262.

[2] p. 68.

[3] "Discourse on Political Economy," p. 257.

[4] *Social Contract*, p. 19.

[5] Everyman translation, pp. 228–78.

analysis which Kant applied, their conclusions are in general agreement. Dispensing with the preliminary stage of doubt with which Descartes prefaced his speculations before arriving at the *Cogito ergo sum* which he took as the touchstone for all truths which he was justified in accepting, the Savoyard Priest resolved to accept as self-evident all that he could not honestly refuse to believe, and to admit as true all that seemed to follow from this. He accepts as fact his own existence, the existence of the senses through which he receives impressions and of the objects giving rise to these sensations. He nevertheless recognises the necessity for a synthetic activity to combine sensations of different sensory modes into one perceived object, and in thus recognising the active participation of mind in perception Rousseau anticipates Kant. Rousseau likewise recognises the existence of "Gestaltqualitäten"—objects of a higher order,[1] which are not given in sensation and which presuppose intellectual synthesis. He thus anticipated much of the criticism later directed against the empiricist standpoint. In considering external reality Rousseau evades the difficulties of the relation between the sensation and the quality, the ego and the cognised reality, by dismissing them as inexplicable: "It is no more possible for me to conceive how my will moves my body than to conceive how my sensations affect my mind." The problem for Rousseau is not the relation between mind and matter, but between matter and motion; "matter receives and transmits motion, but does not produce it". This view of the externality of motion to matter is so at variance with modern theories of matter and energy as to give the argument only historical interest, but Rousseau's emphasis on motion is a recognition of a factor which Descartes neglected in making mind and matter the two ultimate

[1] P. 233: "To see two things at once is not to see their relations nor to judge of their differences. . . . These comparative ideas, greater, smaller, together with number ideas of one, two, etc., are certainly not sensations, although my mind only produces them when my sensations occur."

concepts, and his insistence on its importance is in agreement with modern physics. On it are also based his proofs of God's existence. Motion has two forms—spontaneous or voluntary, and transmitted or acquired. The former is fundamental, and on the analogy of his own voluntary movement Rousseau concludes that it must have a similar cause; he is thus led to formulate the first article of his creed: "There is a will which sets the universe in motion and gives life to nature." From the laws of nature and the orderly arrangement resulting from the motion in the universe Rousseau infers an intelligent directing cause: "If matter in motion points me to a will, matter in motion according to fixed laws points me to an intelligence."[1] Faith in the existence of a divine being is, according to Rousseau, not incompatible with the fixity of natural law but necessitated by it. It need hardly be said that a divine intelligence ordering the course of nature is incompatible with a naturalistic philosophy.

Inconsistent with the orderly arrangement of nature which leads Rousseau to deduce the existence of a divine being are the ways of man, as Rousseau consistently regards them. To remove this obstacle Rousseau has recourse to a dualistic view of human nature as drastic as that necessitated by Kant's rigorism; thus Rousseau says[2]: "While I meditated upon man's nature, I seemed to discover two distinct principles in it; one of them raised him to the study of eternal truths, to the love of justice, and of true morality, to the regions of the world of thought, which the wise delight to contemplate; the other led him downwards to himself, made him the slave of his senses, of the passions

[1] While Kant has demonstrated the invalidity of the argument from design on which Rousseau relies, Rousseau and Kant are at one in contending that by a dialectical argument alone, the existence of God cannot be demonstrated. Thus Rousseau says of God: "He hides himself alike from my senses and my understanding."

[2] *Émile*, p. 241. Cf. also p. 256.

which are their instruments, and thus opposed everything suggested to him by his former principle. When I felt myself carried away, distracted by these conflicting motives, I said, No; man is not me; I will and I will not; I feel myself at once a slave and a free man; I perceive what is right, I love it, and I do what is wrong; I am active when I listen to the voice of reason; I am passive when I am carried away by my passions; and when I yield, my worst suffering is the knowledge that I might have resisted." Freedom, for Rousseau, requires no explanation; "it is not the word freedom that is meaningless, but the word necessity". Man judges between good and evil as he judges between truth and falsehood; his intelligence is the power that determines his judgment, and beyond that Rousseau does not consider it necessary to go. Immortality depends on the fact that as the soul is an immaterial substance, the dissolution of the natural body does not necessitate the destruction of the soul; this is precisely Plato's argument in Book X of the *Republic*: "Everything is destroyed only by its own connatural evil and vice," but the conception of an immaterial substance Kant showed in his treatment of the antinomies in the *Critique of Pure Reason* to be self-contradictory.

Having dealt with the fundamental doctrines—God, freedom and immortality—Rousseau proceeds to examine the principles of conduct. These he finds in the depths of his own heart: "What I feel to be right is right, what I feel to be wrong is wrong; concience is the best casuist." Conscience is for him at once the voice of reason and the voice of nature; it is to the soul what instinct is to the body; he who obeys conscience is following nature. Rousseau is aware of the inconsistencies of conscience over which the sceptic makes merry, having in mind those instanced by Montaigne[1]; he might equally have referred to Locke's

[1] Doubtless the essay, "Of Custom": "The laws of conscience, which we say proceed from nature, rise and proceed of custom."

Essay.[1] In fact the method adopted by these writers and by certain sociologists is a valuable support to naturalism. To their examples of relativity Rousseau opposes the uniformities of the modes of conduct, and by emphasising the universal principles of morality reinforces the idealistic contention that without objectivity there is no morality. Conscience, for Rousseau, speaks with a voice that is universal, not individual, and the will of the good man is for him, as for Kant, a universally legislative will. Thus: "Whenever there is feeling and intelligence, there is some sort of moral order. The difference is this: the good man orders his life with regard to all men; the wicked orders it for self alone. The latter centres all things round himself; the other measures his radius and remains on the circumference. Thus his place depends on the common centre, which is God, and on all the concentric circles which are his creatures." Rousseau also maintains that in man there is an innate capacity for morality. This has been eloquently expressed by R. L. Stevenson, between whose writings and those of Rousseau there are interesting parallels. Everywhere, says Stevenson,[2] we find people "keeping the point of honour and the touch of pity, often repaying the world's scorn with service, often standing firm upon a scruple, and at a certain cost, rejecting riches: everywhere some virtue cherished or affected, everywhere some decency of thought and carriage, everywhere the ensign of man's ineffectual goodness: ah! if I could show you this! if I could show you these men and women, all the world over, in every stage of history, under every abuse of error, under every circumstance of failure, without hope, without help, without thanks, still obscurely fighting the lost fight of virtue, still clinging in the brothel or on the scaffold, to some rag of honour, the poor jewel of their souls! They may seek to escape, and yet they cannot; it is not alone their privilege and glory, but their doom;

[1] *On the Human Understanding*, bk. i, ch. iii.

[2] *Across the Plains*.

they are condemned to some nobility; all their lives long, the desire of good is at their heels, the implacable hunter."[1] The same doctrine is succinctly expressed by Rousseau in the question: "But do you think there is any one man upon earth so depraved that he has never yielded to the temptation of well-doing?"

That Kant was influenced by Rousseau we have given sufficient evidence. If further demonstration were demanded we could cite Kant's *Lectures on Education*, doubtless the least systematic and least original of his writings. Both Rousseau and Kant in their educational schemes have merely elaborated and generalised Locke's one short rule of physical education: "That gentlemen should use their children as the honest farmers and substantial yeomen do theirs."[2] Kant's dependence on Rousseau has not escaped the former's commentators,[3] but even more generous in his acknowledgments to Rousseau than his commentators is Kant himself. The passage in which Kant has spoken of the change in disposition effected in him by Rousseau runs: "I myself am by inclination an investigator. I feel an absolute thirst for knowledge, and a longing unrest for further information. There was a time when I thought all this constituted the real worth of mankind, and I despised the rabble who knew nothing. Rousseau has shown me my error. This dazzling advantage vanishes, and I should regard myself as of much less use than the common labourers if I did not believe that this speculation (that of the Socratic-critical philosophy) can give a value to everything else to restore the rights of humanity."[4] We conclude, then, that not only must Rousseau be regarded as an idealist, but that

[1] Cf. Francis Thompson's *The Hound of Heaven*.

[2] *Some Thoughts Concerning Education*, § 4.

[3] e.g. F. Paulsen, *Immanuel Kant: His Life and Doctrine*, translated by J. E. Creighton and Albert Lefevre (London: John C. Nimmo, 1902), p. 40; W. Wallace, *Kant* (Edinburgh: Wm. Blackwood & Sons, 1882), p. 27; Caird, *The Critical Philosophy of Kant*, vol. i, p. 60.

[4] Quoted by Paulsen, p. 39.

for educational purposes it is also better to approach the writings of Kant from the standpoint of Rousseau than from that of Hume or Leibniz, as is customary in philosophy.

Kant, "the true founder of modern German philosophy", sought to establish the validity of the concepts of scientific knowledge, of morality, and of religion, and thus to refute the scepticism which had resulted from the adoption by philosophy of Locke's empirical standpoint and Hume's relentless application of Locke's "plain historical method".[1] Kant's problem expressed in its simplest and most general terms was a twofold one, to account for freedom in the moral sphere and necessity in the scientific sphere. It was with the latter problem that he dealt first, in the *Critique of Pure Reason*, the problem how to account for the conviction of necessity which characterises scientific laws or for the fact that in our ordinary thinking we conclude from this to that.[2] Kant formulated his problem in the well-known question—How are synthetic *a priori* propositions possible? In seeking an answer to this question he was forced to recognise that such synthetic activity of mind was involved not merely in judgments referring to the scientific world but even in all knowledge and experience; thus his problem assumed the more general form—how to account for experience in general. It was this problem which Locke had earlier set himself, although by his assumption that the mind is but the passive recipient of impressions received from the outside world he prejudiced his procedure, thereby drawing upon himself the condemnation of Fichte,[3] who characterised Locke's doctrine as "the worst of all philosophical systems". Psychology, which owes much to Locke's method of procedure that was so unfortunate for metaphysics, has

[1] Cf. *Critique of Practical Reason and Other Works on the Theory of Ethics*, p. 100: "Universal empiricism reveals itself as absolute scepticism."

[2] Kant's *Critique of Practical Reason*, etc., p. 97.

[3] *The Popular Works of J. G. Fichte*, vol. ii, translated by W. Smith (London: "Characteristics of the Present Age," lecture vii, John Chapman, 1899).

itself been forced to abandon Locke's position and to emphasise for its own requirements the synthetic or creative activity of mind. It is to Kant's credit that he anticipated this development, and that he sought by a complete inversion of the empiricist position, by investigating the activities of the knowing mind, to account for human experience.

The problem Kant formulated for himself in the *Critique of Pure Reason* was to account for synthetic *a priori* propositions. The *Critique of Practical Reason* might likewise be regarded as an attempt to account for a certain type of synthetic proposition, namely, the synthesis involved in the relation between virtue and happiness. In the *Critique of Pure Reason* he demonstrated the validity of the concept of necessary causal connection which was assumed by natural science: in the *Critique of Practical Reason* he established the validity of the concept of freedom which is an indispensable postulate of morality. The latter he accomplished by restricting speculative reason to empirical knowledge and extending the employment of practical reason to the establishment of the existence of God and the justification of immortality. By removing the conceptions God, freedom and immortality beyond the range of speculative inquiry Kant thereby removed them beyond the attacks of scepticism. "Their use is limited simply to the practice of the moral law,"[1] that is, they are ethical necessities. Kant's creed is not, "I believe in the existence of God, the immortality of the soul, the freedom of man", but, "I will that there be a God, that my existence in this world be also an existence outside the chain of physical causes, and in a pure world of understanding, and lastly that my duration is endless".[2]

As Kant attributes primacy to the practical reason, he

[1] *Critique of Practical Reason*, etc., p. 235.
[2] *Critique of Practical Reason*, etc., p. 241.

has been claimed by certain pragmatists as an exponent of their doctrine. But while he gives priority to the sphere of will over that of intellect[1] he maintains that this is not an outcome of a conflict between them, since it "is necessary for the possibility of any employment of reason at all that its principles and affirmations should not contradict one another".[2] At most such a conflict would merely be a contest between two aspects of reason—the practical and the speculative, not a conflict between reason and other aspects of mind. While the primacy of the practical reason over the speculative does not necessarily involve the subordination of the latter in its own sphere to the former, it has also to be noted that the will to which the intellect might even be regarded as subordinated is a universally legislative will, not the will of the modern pragmatists which is marked by its assertion of its own individual nature, and is frequently synonymous with a subjective wish or desire which cannot affect natural law, for, as Kant warns us,[3] "we are in no wise justified in assuming on account of what we wish on merely subjective grounds, that the means are possible or that its object is real". Even if it be admitted that Kant subordinates the speculative to the practical reason, he does not, like modern pragmatism, subordinate reason to instinct and impulse or to an emotional postulate. His defence of the primacy of practical reason, while the basis of his idealism, cannot consequently be cited in support of pragmatism with which it has practically nothing in common.

By attributing supremacy to the practical reason Kant constitutes the ethical sphere the complement of the scientific world. He likewise calls in religion to redress the incompleteness of the moral sphere, but expressly declares

[1] Kant expressly states (*Critique of Practical Reason*, etc., p. 92) that this is not due to any imperfections or incompleteness in speculative reason, "for this is for its own purpose complete".

[2] *Critique of Practical Reason*, etc., p. 216.

[3] *Critique of Practical Reason*, etc., p. 241

that he does not thereby deprive the moral law of its absoluteness nor does he propose to derive the sanctions of morality from religion. Thus he affirms[1] that it is not necessary "to suppose the existence of God as a basis of all obligation in general (for this rests, as has been sufficiently proved, simply on the autonomy of reason itself)"; and repeats[2]: "The moral laws lead through the conception of the *summum bonum* as the object and final end of pure practical reason to religion, that is, to the recognition of all duties as divine commands, not as sanctions, that is to say, arbitrary ordinances of a foreign will contingent in themselves, but as essential laws of every free will in itself." The moral and religious attitudes are thus different aspects of the same function, and although the religious is necessary to make the moral complete, the latter is not thereby made dependent on religion. To explain the relationship between morality and religion, no better distinction can be employed than that between the supreme good and the complete or perfect good which Kant himself employs in explaining the relation between virtue and happiness. "The *summum*", he says,[3] "may mean either the supreme (*supremum*) or the perfect (*consummatum*). The former is that condition which is itself unconditioned, that is, is not subordinate to any other; the second is that whole which is not a part of a greater whole of the same kind." Thus while virtue is the supreme good, happiness is necessary to make the *summum* complete, so morality is supreme, that is, unconditioned, while religion is necessary to make the whole complete or perfect. While a life without religion may therefore be regarded as incomplete, morality is likewise indispensable, and the authority of the moral law is left unimpaired by the demand that religion is necessary to complement morality.

[1] *Critique of Practical Reason*, etc., p. 222.
[2] *Critique of Practical Reason*, etc., p. 226.
[3] *Critique of Practical Reason*, etc., p. 206.

The moral law, for Kant, requires the freedom of the individual's will and the universality of his actions. The determining factor of the individual's will, if it is also to be the determining factor of the will for everyone, cannot be the matter, but only the pure form, of the law, and the only possible motive compatible with this is respect for the pure form of the law; as the will finds its principle of determination in the pure *form* of the law, it consequently remains a free will. "Thus freedom and an unconditional practical [i.e. moral] law reciprocally imply each other."[1] It is consequently because the freedom of the will is at stake that Kant strives by all the means in his power to preserve the purity of the motive that determines man's actions and to eliminate any impulse, inclination or desire originating in man's physical or sensible nature which would compromise this purity. For beings constituted as we are the moral law appears as a law of duty, of moral constraint, "the notion of duty, therefore, requires in the action, objectively, agreement with the law, and, subjectively in its maxim, that respect for the law shall be the sole mode in which the will is determined thereby".[2] Like Wordsworth after him, but with an austerer vision, seeing not the smile upon its face which the poet beheld, Kant is led to apostrophise duty thus:[3]

"Duty! Thou sublime and mighty name that dost embrace nothing charming or insinuating, but requirest submission, and yet seekest not to move the will by threatening aught that would arouse natural aversion or terror, but merely holdest forth a law which of itself finds entrance into the mind, and yet gains reluctant reverence (though not always obedience), a law before which all inclinations are dumb, even though they secretly counter-work it; what

[1] *Critique of Practical Reason*, etc., p. 117.
[2] *Critique of Practical Reason*, etc., p. 174.
[3] *Critique of Practical Reason*, etc., p. 180.

origin is there worthy of thee, and where is to be found the root of thy noble descent which proudly rejects all kindred with the inclinations; a root to be derived from which is the indispensable condition of the only worth which men can give themselves?

"It can be nothing less than a power which elevates man above himself (as a part of the world of sense), a power which connects him with an order of things that only the understanding can conceive, with a world which at the same time commands the whole sensible world, and with it the empirically determinable existence of man in time, as well as the sum total of all ends (which totality alone suits such unconditional practical laws as the moral). This power is nothing but *personality*, that is, freedom and independence of the mechanism of nature, yet, regarded also as a faculty of a being which is subject to special laws, namely, pure practical laws given by its own reason; so that the person as belonging to the sensible world is subject to his own personality as belonging to the intelligible (supersensible) world. It is then not to be wondered at that man, as belonging to both worlds, must regard his own nature in reference to its second and highest characteristic only with reverence, and its laws with the highest respect."

In the *Methodology of Pure Practical Reason* Kant outlines the procedure by which the ideal of duty can be brought to operate effectively in the individual's life. The term "methodology" he employs not in the usual sense of an exposition of the general principles underlying a science but in the special sense of the application of moral principles to individual conduct: "By this methodology is understood the mode in which we can give the laws of pure practical reason access to the human mind, and influence on its maxims, that is, by which we can make the objectively practical reason subjectively practical also."[1]

[1] Kant's *Critique of Practical Reason*, etc., p. 249.

That human conduct can be influenced by an ideal so abstract and pure as that proposed by Kant might reasonably be questioned, but the very possibility of morality depends on the susceptibility of the individual to this type of influence, "and if human nature were not so constituted, no mode of presenting the law by roundabout ways and indirect recommendations would ever produce morality of character". But that this, the highest stage of moral evaluation, cannot be forthwith assumed or attained, Kant was ready to admit, even affirming that "in order to bring an uncultivated or degraded mind into the tract of moral goodness, some preparatory guidance is necessary, to attract it by a view of its own advantage, or to alarm it by fear of loss". But he continues[1]: "As soon as this mechanical work, these leading-strings, have produced some effect, then we must bring before the mind the pure moral motive, which, not only because it is the only one that can be the foundation of a character (a practically consistent habit of mind with unchangeable maxims), but also because it teaches a man to feel his own dignity, gives a power unexpected by himself, to bear himself from all sensible attachments so far as they would fain have the rule, and to find a rich compensation for the sacrifice he offers, in the independence of his rational nature and the greatness of soul to which he sees that he is destined."

The means Kant proposes to adopt to secure this end is not that of stories and the method that of suggestion, but argument or discussion regarding the moral worth of this or that action. Rousseau had contended that it was injudicious to argue with children regarding the morality of actions, condemning Locke, quite unjustly, for reasoning with children,[2] whereas all that Locke had intended was that children should be "treated as rational creatures".[3] To illus-

[1] *Critique of Practical Reason*, etc., p. 250.
[2] *Émile*, Everyman translation, p. 53. [3] *Some Thoughts Concerning Education*, § 81.

trate the futility of justifying moral values to children, Rousseau reports in the *Émile*[1] the following dialogue:

Master. You must not do that.
Child. Why not?
Master. Because it is wrong.
Child. Wrong! What is wrong?
Master. What is forbidden you.
Child. Why is it wrong to do what is forbidden?
Master. You will be punished for disobedience.
Child. I will do it when no one is looking.
Master. We shall watch you.
Child. I will hide.
Master. We shall ask you what you are doing.
Child. I shall tell a lie.
Master. You must not tell lies.
Child. Why must not I tell lies?
Master. Because it is wrong, etc.

"That is the inevitable circle," comments Rousseau. "Go beyond it, and the child will not understand you."

Teachers have to recognise that the ultimate appeal is to the good itself. As Boutroux puts it,[2] "To the question: 'Why should one do this and avoid that?' the teacher can give but one reply, the only one, after all, possible to a human being. This is good, that is evil." Kant would have approved the contention of Rousseau and Boutroux that no sanction intelligible to children can be given for the ultimate moral standard, that the only satisfactory proof is a transcendental one—that morality is rooted in the nature of things—but the type of argument he projects concerns not the question of the nature and validity of the final standard of worth, but, this being acknowledged, the comparative

[1] *Émile*, Everyman translation, p. 54.
[2] E. Boutroux, *Education and Ethics*. English translation by F. Rothwell (London: Williams & Norgate, 1913).

merits of certain chosen actions when measured by the standard.[1]

Instead of debating "certain chosen actions", as Kant proposed,[2] the prefects in a new discipline school or the citizens in a classroom republic debate actual incidents challenging constituted authority or interfering with the tenor or efficiency of their little community, and in this way school themselves into treating dispassionately the more serious moral and social problems of later life.

As Kant conceived it incumbent on him to explain how the ideal of duty in all its purity and abstractedness could be reduced to the level of practice, so the task that fell to his immediate successors was to explain how the transcendental conception of freedom was to be harmonised with subjection to authority and discipline in the training of the immature mind. Kant himself recognised that this was one of the greatest problems of education: "How to unite submission to the necessary restraint with the child's capability of exercising his free will—for restraint is necessary. How am I to develop the sense of freedom in spite of the restraint? I am to accustom my pupil to endure a restraint of his freedom, and at the same time I am to guide him to use his freedom aright. Without this all education is merely mechanical."[3] The difficulty was complicated by the current misunderstanding of the term *transcendental*; it was regarded as synonymous with transcendent and was thought to imply

[1] *Kant on Education*, p. 81: Children "must not be allowed to argue about everything. It is not necessary for them to know the principles of everything connected with their education; but when the question of duty arises, they should be made to understand those principles".

[2] Kant suggested the use of a catechism of right conduct, containing, in popular form, everyday questions of right and wrong. For instances see *Kant on Education*, pp. 103–4.

[3] *Kant on Education*, p. 27. Cf. F. L. Luqueer, *Hegel as Educator*, p. 176: "The aim of education is to make man an independent being; that is, a being whose will is free. To this end many checks are put upon the desires of children. They must learn obedience, so that their self-will and their dependence upon the desires of sense be done away with, and thus their will made free."

that the will was totally unmotived. For this reason we find Herbart declaring[1] that not the slightest breath of transcendental freedom must blow through any cranny into the domain of the educator; he also says[2] that we must not be surprised to find that the doctrine of transcendental freedom which emanated from Kant is at the same time a doctrine of fatalism, especially in regard to the temporal development of all actions and opinions. Yet he could maintain[3] that education would be tyranny if it did not lead to freedom.

Fichte felt the force of this difficulty. In his *Addresses to the German Nation* he seeks to recall the German people to a sense of their own national self-respect, to teach them that they may still be masters of their fate, that although defeated they need not also be despised. Their salvation, he proclaimed, could only be secured by a new order of things, by the development of a new spirit, for "whatever has lost its independence has at the same time lost its power to influence the course of events".[4] The regeneration that is requisite can in Fichte's view only be effected by education: "it is a total change of the existing system of education that I propose as the sole means of preserving the existence of the German nation".[5] The defects of the old system were that it had neither a true conception of education for manhood nor the power to realise that conception; more specifically he declares[6]: "In order to define more clearly the new education which I propose, I should reply that that very recognition of, and reliance upon, free will in the pupil is the first mistake of the old system and the clear confession of its impotence and futility. . . . Henceforth education for

[1] Herbart, *ABC of Sense Perception and Minor Pedagogical Works*, translated by W. J. Eckoff (New York: D. Appleton & Co., 1903), p. 96.
[2] *Umriss pädagogischer Vorlesungen*, § 5, Anmerkung (not included in English translation).
[3] *Berichte an Herrn von Steiger*, i.
[4] Fichte, *Addresses to the German Nation*, English translation, p. 10.
[5] Fichte, *Addresses to the German Nation*, English translation, p. 13.
[6] Fichte, *Addresses to the German Nation*, English translation, pp. 20–2.

manhood must be taken from the influence of this mysterious and incalculable force and put under the direction of a deliberate art, which will surely and infallibly accomplish its purpose with everyone entrusted to it; or which, if somehow it does not accomplish it, will at least know that it has not done so, and that therefore the training is still incomplete. The education proposed by me, therefore, is to be a reliable and deliberate art for fashioning in man a stable and infallible good will."

Fichte cannot quite resolve the antinomy of necessity and freedom in man; there is some justification for accusing him of inconsistency in dealing with this problem.[1] The difficulty has been felt by later writers and arises from the fact that freedom is not so much a datum in education, as an ideal to which even after all our striving we only imperfectly attain. The poet's conception[2] of freedom as a development is right when he exhorts:

Build thee more stately mansions, O my soul,
As the swift seasons roll!
Leave thy low-vaulted past!
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast
Till thou at length art free,
Leaving thine outgrown shell by life's unresting sea.

The child is thus not born free; his apparent freedom is merely an intermittent servitude. A freedom of caprice, a liberty of indifference, makes him the slave of every passing whim, of every chance desire.[3] It is this freedom that Fichte condemns; thus he says[4]: "Freedom, taken in the sense of

[1] Cf. G. H. Turnbull, *The Educational Theory of Fichte: A Critical Account* (University of Liverpool Press, 1926), p. 94.
[2] O. W. Holmes, *The Chambered Nautilus.*
[3] Cf. W. James, *Principles of Psychology* (London: Macmillan & Co., 1890), vol. i, p. 417.
[4] *Addresses to the German Nation*, p. 120.

indecisive hesitation between several courses equally possible, is not life, but only the forecourt and portal to real life. At some time or other there must be an end of this hesitation and an advance to decision and action; and only then does life begin." The problem, as it appears to Fichte, is not whether man is free, but rather what kind of freedom he possesses. Thus he says[1]: "To the general question whether man is free or not, there is no general answer; for, just because man is free in the lower sense, because he begins in indecisive vacillation and hesitation, he may be free, or he may not be free, in the higher sense of the word. . . . On the other hand, he, whose life is possessed by the truth and has become life direct from God, is free and believes in freedom in himself and others." The child, in fact, only wins his freedom gradually; he grows in freedom, and is successful only in so far as he is capable of subordinating his present impulses to the attainment of more complete and higher purposes. Only when the individual has attained the philosophic insight of Plato's rulers, has become "the spectator of all time and of all existence", or when he can orient all things in Spinoza's phrase "*sub specie aeternitatis,*" can he be regarded as free in the fullest sense.

This gradual evolution of freedom, long neglected by philosophers, has not been overlooked by educationists. Plato, in the *Republic*,[2] writes: "This is plainly the intention of law and also of the government of children which consists in withholding their freedom, until the time when we have formed a constitution in them, as we should in a city, and until, by cultivating the noblest principle in their nature, we have established in their hearts a guardian and a sovereign, the very counterpart of our own: from which time forward we suffer them to go free." Locke, who announced that men are by nature all free, equal and independent, confesses that children are not born in this full state, though

[1] *Addresses to the German Nation*, p. 123. [2] §§ 590–1.

they are born to it: "Thus we are born free as we are born rational; not that we have actually the exercise of either; age that brings one, brings with it the other too. And thus we may see how natural freedom and subjection to parents may consist together, and are both founded on the same principle." Froebel, an apostle of freedom in education, is nevertheless reported[1] to have replied to the suggestion: "You do not, then, concur in the axiom 'Everyone is born free, and brings the right of personal freedom into the world with him'?" "No," answered Froebel, "not in this sense. Man, on the contrary, is born entirely fettered on all sides, and truly for this reason, that he can and must obtain freedom only by his own striving. Freedom cannot be bestowed upon us. God Himself cannot bestow it upon us, since it must be the product of our moral and intellectual unfettering, which it is possible to attain only by self-activity. Every individual has to free himself from the various fetters of his undeveloped condition of childhood by the help of educative influences." The same view is expressed by a modern writer thus: "The task of the educator is a strange one: to act on mind and conscience in such a way as to render them capable of thinking and judging of themselves, to determine initiative, arouse spontaneity, and fashion human beings into freedom. The work is as glorious as it is difficult; it is something of like nature with divine creation."[2]

If freedom is an ideal for the philosopher, it is a problem for the educator. The writers whom we have just cited connect freedom with creation, self-activity, originality. This aspect is essential; the child can only become free by

[1] *Reminiscences of F. Froebel*, by Baroness B. von Marenholz-Bülow, translated by Mrs. Horace Mann (Boston: Lee & Shepherd, 1895), p. 140.

[2] Boutroux, *Education and Ethics*, p. 10.

Cf. *Kant on Education*, p. 20: "It is not enough that a man shall be fitted for any end, but his disposition must be so trained that he shall choose none but good ends."

exercising his freedom. But he can only exercise his freedom in an environment. Liberty or freedom is not an empty power; as Kant's light dove, piercing in her easy flight the air and perceiving its resistance, imagines that flight would be easier still in empty space, so many assume that freedom is only possible apart from environment, whereas an environment is necessary for its development. The Montessori system of education is frequently criticised on the ground that its sensory and didactic apparatus restricts the child's freedom, but the system is freer than the traditional system just in so far as it provides more material adapted to the child's stage of development than does the traditional classroom, and thus affords greater opportunities for developing his independence. A more serious danger threatens from the social environment. Rousseau seeks to withhold the pupil from the social environment till he has formed a stable character in him. His objection to adult domination with its danger of repression is now generally admitted. The new freedom avoids this by introducing the discipline of the pupil by his compeers which admits the social factor without endangering his independence. The course of training in freedom is, then, to bring the child to adapt himself to a specially prepared environment, not only submitting himself to its necessities but also controlling it as he increases in strength and skill; at the same time he learns to participate in the government of others of his own age, and in turn to submit voluntarily to their government,[1] thus growing in freedom till he becomes politically a full member of an adult self-governing community and, morally, obedient to a perfect law which is self-imposed.

[1] Cf. Fichte, *Addresses to the German Nation*, p. 33: "Under the new system of education the pupils, although separated from the adult community, will, nevertheless, undoubtedly live together among themselves and so form a separate and self-contained community with its organisation precisely defined, based on the nature of things and demanded throughout by reason. The very first image of a social order which the pupil's mind will be stimulated to create will be that of the community in which he himself lives."

If Fichte did not quite attain to this view he did much to emphasise the importance of the spontaneous activity of the pupil, and it was this feature that attracted him to the work of Pestalozzi. The new education which Fichte proposed to the German people was to develop in the pupil creative mental activity; it was to aim "especially and directly only at stimulating regular and progressive activity"[1]; knowledge, although an important part of the training, was not to be the aim; it was merely incidental. This mental activity would lead the pupil to learn with pleasure and love, and "this love exalts his personality and introduces him systematically and deliberately into a wholly new order of things"[2]; it is the immediate preparation for moral training. The pupil will also be led to recognise that not only is he a member of human society, but that he is also "a link in the eternal chain of spiritual life and a higher social order".[3] Thus he is led to religion, and will perceive that "the spiritual life which really exists is one, the divine life itself, which exists and manifests itself only in living thought. He will thus learn to know and keep holy his own and every other spiritual life as an eternal link in the chain of the manifestation of the divine life."[4] The ultimate aim of the new education advocated by Fichte is thus not simply the art of training the pupil to pure morality, but is rather the art of training the whole man completely and fully for manhood.[5] The old education, he maintained,[6] was able at best to train some part of man, but the new must train man himself; and "only the nation which has first solved in actual practice the problem of educating perfect men will then solve the problem of the perfect state".[7]

[1] *Addresses to the German Nation*, p. 27.
[2] *Addresses to the German Nation*, p. 30.
[3] *Addresses to the German Nation*, p. 37.
[4] *Addresses to the German Nation*, p. 38.
[5] *Addresses to the German Nation*, p. 41. This includes moral, religious and intellectual training, but "nowhere did he describe the ideal artist". E. Bergmann, *Fichte, der Erzieher zum Deutschtum* (Leipzig: F. Meiner, 1915), p. 133.
[6] *Addresses to the German Nation*, pp. 14–15.
[7] *Addresses to the German Nation*, p. 102.

Fichte's views on education fulfil most of the requirements of an idealistic education, and in recent developments in educational practice they are being realised. The closest approximation to them in his own day to which Fichte could allude was the system of Pestalozzi, and while fully realising that Pestalozzi's practices departed in many respects from his principles,[1] Fichte nevertheless recognised that Pestalozzi's thought was infinitely more and infinitely greater than Pestalozzi himself.[2]

Pestalozzi's indebtedness to his predecessors is difficult to estimate, more especially his dependence, if any, on Kant.[3] His own statement made in 1801 that for over thirty years he had not read a book is something of a hyperbole, as Wiget explains,[4] for his letters throughout this period afford evidence that he had thoroughly acquainted himself with the German and English systems of philosophy. His intercourse with visitors interested in philosophical and political questions may have served instead of personal study. Thus in 1793 he was visited by Fichte, who three years earlier had experienced what Bergmann designates his "*Damascus*" as the result of reading Kant's *Critique of Pure Reason*, and who in 1791 had visited Kant himself at Königsberg; and it can hardly be doubted that Pestalozzi caught something of Fichte's enthusiasm for the new evangel. The idealism in Pestalozzi's writings may, however, have been directly derived from Rousseau, if our interpretation of Rousseau as an idealist, suggested above, is accepted, just as the educational ideal of Fichte, even before he came under Kant's influence, was more like

[1] Cf. "Patriotism and its Opposite" in Turnbull's *The Educational Theory of Fichte*, pp. 160–80; also *Addresses to the German Nation*, ix et seq.

[2] "Patriotism and its Opposite," p. 164.

[3] E. Bergmann, *Fichte, der Erzieher zum Deutschtum*, p. v: "From Luther the way goes right through Kant to Pestalozzi and Fichte." Cf. P. Natorp, *Der Idealismus Pestalozzis* (Leipzig: Felix Meiner, 1919), pp. 21–2.

[4] T. Wiget, *Grundlinien der Erziehungslehre Pestalozzis* (Leipzig: K. F. Koehler, 1914), p. 4.

that of Rousseau than Fichte himself would have guessed.[1]

In recommending Pestalozzi's system to the German people Fichte maintained that, in spite of his efforts to provide an education merely for the downtrodden, Pestalozzi evolved a universal system. "The soul of Pestalozzi's life was love for the poor neglected people; his love was so blessed that he found more than he sought, the sole means of salvation for all mankind. . . . In order then to understand him correctly and to value him fully, one must first and foremost grasp Pestalozzi's thoughts in this sense, not as the intellectual education only of the poor oppressed people, but as the absolutely indispensable elementary education of the whole future generation and of all generations from henceforth."[2] This universal and common education for all is derived from Rousseau and Kant[3]—Bergmann refers to the democratic ethics of duty[4]—and from this time an idealistic and a democratic education have almost been synonymous. Pestalozzi's aim of education, accepted by Fichte, namely, the development of manliness, including not only intellectual but also physical, practical, aesthetic, moral and religious development, implies the idealistic standpoint, but his idealism finds its most adequate expression in his *Letters to Greaves*.[5] In these he clearly demarks the limits of naturalism, asserting: "The animal instinct is a principle which knows no higher object than self. Self-preservation is the first point which it tries to secure; and in its progressive desire of enjoyment, self is still the centre of its agency. It is not the same with the mind, or with the affections of the heart. The fact which speaks most unquestionably for the spiritual nature of man, is the sacrifice

[1] Cf. Bergmann, *Fichte, der Erzieher zum Deutschtum*, p. 45.
[2] "Patriotism and its Opposite," Cf. *Addresses to the German Nation*, p. 159.
[3] Cf. Bergmann, *Fichte, der Erzieher zum Deutschtum*, p. 45.
[4] *Fichte, der Erzieher zum Deutchtum*, p. 5.
[5] *Letters on Early Education. Addressed to J. P. Greaves, Esq.*, by Pestalozzi, translated from the German manuscript (London: Sherwood, Gilbert & Piper, 1827).

of personal comfort or enjoyment, for the happiness of others; the subordination of individual desire to higher purposes." And he repeats: "While the animal is for ever actuated by that instinct to which it owes its preservation, and all its powers and enjoyments, a something will assert its right in man, to hold the empire over all his powers; to control the lower part of his nature, and to lead him to those exertions which will secure for him a place in the scale of moral being."

Froebel's educational writings reflect in quite unequivocal fashion the idealistic tendencies of his age. For this reason they still make an appeal to many who have rejected his pedagogical practices. He himself has acknowledged his indebtedness to Schelling's work *On the World Soul*, published in 1798, stating "what I read in that book moved me profoundly, and I thought I understood it"; but the philosophical position adopted by Froebel in the opening paragraphs of *The Education of Man* does not quite represent Schelling's attitude as set forth in this work. In *On the World Soul* Schelling sought a principle which should reduce all nature to unity, and found it in the conception of matter as a force that always manifests itself in opposite directions.[1] Schelling premised that this principle must not be sought in any transcendental supernatural region, whether called God or Fate, but it is just here that Froebel finds his ultimate principle, for he commences *The Education of Man* by declaring[2]: "In everything dwells and rules an eternal law. This law expresses itself, distinctly and clearly, alike in what is external to man—Nature; in what is internal to man—the Soul; and in what unites these two—Life. . . . As foundation of this all-ruling law, exists of necessity a conscious, almighty and eternal Being. . . . The

[1] J. Watson, *Schelling's Transcendental Idealism* (Chicago: S. C. Griggs & Co., 1882), p. 95.

[2] W. H. Herford, *The Student's Froebel*, part i, p. 37 (London: Sir Isaac Pitman & Sons, Ltd., 1916).

one Being is God. Everything came forth from God, and by God alone is governed; so that the sole foundation of all things is God. In everything God rules and lives. Everything rests and subsists in God. Things exist only because God acts in them." Froebel's pronouncements here have rather an affinity with the earlier philosophy of Fichte, for whom Reason was a self-conscious activity manifesting itself in the contrast of self and not-self, a view that also had exercised a great influence on Schelling. But it is a needless task to attempt to fix precisely Froebel's indebtedness to the great idealists, for in his *Autobiography* he confesses that at Jena—the philosophical Mecca of the time—he studied nothing purely theoretical but mathematics, and of philosophical teaching and thought he learnt only as much as the intercourse of university life brought with it; indeed, as we have elsewhere suggested,[1] it was doubtless by Krause that he was most influenced, and between Froebel's views and those of Krause there is a close correspondence.

Froebel makes frequent use of the dialectical process, and while not disclaiming acquaintance with Hegel's method, he maintains that he does not know how Hegel had formulated and applied it. The principle of the unity of opposites is to be found in Schelling and was common to most of the writers of the day, and Froebel's applications of it do not exhibit that inherent necessity which drives Hegel from *thesis* to *antithesis* and then to a reconciliation in a higher *synthesis*. But the development of their thought moved along parallel lines, and each affected readers to whom the other would be unknown; both too, as we should naturally expect, have much in common with Kant.

Hegel[2] regards pedagogy as the art of making men ethical. It looks upon man as natural, and points out the way in which he is to be born again. His first nature must be converted into a second spiritual nature, in such a manner that the

[1] *The Doctrines of the Great Educators.*

[2] 1770–1831.

spiritual in him becomes a habit.[1] For Froebel the aim of education is to produce a pure, faithful, complete, and therefore holy life.[2] The realisation of such a spiritual aim cannot be left to nature. "Nature has placed no instinct in man for that purpose," says Kant, and Hegel repeats: "A man attains what he should, not by instinct. He must win his true place. On this is based the child's right to be educated." Education accordingly becomes of supreme significance. Thus Kant maintains that man can only become man by education,[3] and Hegel that man becomes what a man should be only through culture,[4] and culture, Hegel explains, is in its ultimate sense a liberation and that of a high kind, involving a struggle against mere subjectivity, immediate desire, subjective vanity and capricious liking, hence the hardness of the task and the disfavour under which it falls. For Froebel the divine in man, which is his Essence, is to be unfolded and brought to his consciousness by means of education; and man himself is to be raised to a consciousness of living up to, and realising in freedom, the Divine which acts in him.

For Hegel there were not, as with Kant, two worlds—a natural and a spiritual, but, as he expresses it, what is rational is real, and what is real is rational.[5] The ultimate source of all being and of all knowing is the Absolute; it is analogous to Plato's Idea of the Good. "The Absolute", he explains,[6] "is Mind (Spirit)—this is the supreme definition of the Absolute. To find this definition and to grasp its meaning and burthen was the ultimate purpose of all

[1] *Hegel's Philosophy of Right*, translated by S. W. Dyde (London: George Bell & Sons, 1896), p. 161.

[2] *The Student's Froebel*, part i, p. 38.

[3] *Kant on Education*, p. 6.

[4] *Hegel as Educator* (Macmillan & Co., 1896), p. 108; also *Hegel's Philosophy of Right*, p. 191.

[5] *Hegel's Philosophy of Right*, Author's preface, p. xxvii. In introducing this statement Hegel refers to Plato.

[6] *Hegel's Philosophy of Mind*, translated by W. Wallace (Oxford University Press, 1894), p. 7.

education and all philosophy". Hegel's Absolute, in its efforts to realise itself more and more adequately, cannot be contained within any fragmentary form of existence. At each successive stage it breaks its fetters to attain higher forms, for "the truth is the whole". This impulse to express itself more fully in a series of successive stages follows a definite pattern—thesis, antithesis, synthesis—the dialectical movement of Hegel. "Collisions, in fact, belong to the nature of thought, the nature of consciousness and its dialectic."[1] This dialectical process can be adduced in support of a revolutionary view of human progress, one extreme inviting another. It was abandoned by late idealists in favour of evolutionary development under the influence of Darwin's *The Origin of Species* (1859).

A charge that could obviously be levelled against the Hegelian metaphysic was that human personality tended to be completely submerged in the Absolute, if not thereby quite annihilated. Foremost in Britain to protest was A. Seth Pringle-Pattison: "Man as rational and in virtue of self-conscious reason, the free shaper of his own destiny, furnishes us", he declares,[2] "with our only indefeasible standard of value, and our clearest light as to the nature of the divine. . . . But inexplicable in a sense as man's personal agency is—nay, the one perpetual miracle—it is nevertheless our surest datum and our only clue to the mystery of existence." But, by reaction, overstressing the individual his conception of personality becomes exclusive: "Each self", we are told,[3] "is a unique existence which is perfectly impervious to other selves—impervious in a fashion to which the impenetrability of matter is a faint analogue. . . . The self accordingly resists invasion . . . for the very

[1] *Hegel's Philosophy of Right*, § 211, addition.

[2] A. Seth Pringle-Pattison, *Man's Place in the Cosmos and Other Essays*—"Introduction" (Edinburgh and London: Wm. Blackwood & Sons, 1897).

[3] *Hegelianism and Personality* (Edinburgh and London: Wm. Blackwood & Sons, 1887), pp. 216–17.

characteristic of a self is this exclusiveness, so far from a principle of union, the self is in truth the very apex of separation and differentiation." "But just as the man has a centre of his own which we cannot occupy, and from which he looks, as it were, upon the inner side of his acts and words (as well as upon a private world of thoughts and feelings, many of which do not take shape in the common or general world at all), so, if we speak of God at all, there must be a divine centre of thoughts, activity, and enjoyment, to which no mortal can penetrate. In this sense every man's being is different for himself from what it is exhibited to others, and God's being may infinitely transcend this manifestation as known to us."

Conscious of the danger that beset absolute idealism and unwilling to accept the exclusive view of human nature, other philosophers recognised the co-ordination of the patterns common to all human minds for, if personalities are wholly exclusive, laws of thought would not be possible, and even speech would be meaningless; their problem was to render compatible human personality and some form of universal mind. But for the fact that the term had been pre-empted for the title of a series of essays[1] on pragmatism, this doctrine could aptly be designated *Personal Idealism*. The German representative of this form of idealism was Rudolf Eucken (1846–1926).[2] He resolves the opposition between nature and spirit by uniting them through active personal experience. Through action the natural world is modified and in the realisation of ideals—truth, beauty, etc., the Universal Mind is reflected. To enhance personality is to realise the Divine Will. British Hegelians also refused to allow human personality to be overwhelmed. T. H. Green[3] includes in the Characteristics of the Moral Ideal a section

[1] *Personal Idealism*, edited by Henry Sturt (London: Macmillan & Co., 1902).

[2] See W. R. Bryce Gibson, *Rudolf Eucken's Philosophy of Life* (London: A. & C. Black, 1906).

[3] *Prolegomena to Ethics* (Oxford University Press, 1899), bk. iii, ch. ii, §§ 180–92.

on "The Personal Character of the Moral Ideal". "It is clearly of the very essence of the doctrine . . . advanced that the divine principle which we suppose to be realising itself in man, should be supposed to realise itself in persons, as such. But for reflection on our personality, on our consciousness of ourselves as objects to ourselves, we could never dream of these being such a self-realising principle at all, whether as implied in the world or in ourselves." In America[1] the doctrine is termed "Personalism". "It holds that all reality is in some sense personal; that there are only persons and what they create; that personality is self-conscious and self-directive both in finite individuals and in a supreme creative intelligence which is the world-ground and source of all reality." Just as Whitehead contends that all forms of reality are organic, so idealism maintains that all such forms are personal.

This idealism, which is at once both "personal" and "objective" while recognising the independence of scientific inquiry, contends that the material and physical universe is an incomplete expression of reality, that it exists but to subserve, and requires to complement it a spiritual universe. It bestows dignity and grandeur upon human life by emphasising the distinctiveness of man's nature, attributing to him powers, not possessed by animals, which issue in ideals—logical, ethical and aesthetic; it admits the existence of a Supreme Being; and by its respect for human personality it provides the basis for democracy.

We may accept as the aim of education the enhancement or enrichment of personality, the differentiating feature of which is the embodiment of universal values. The components out of which personality is fashioned are the child's endowment and his environment; these must be so regarded as to be compatible with the idealistic conceptions of human

[1] *Twentieth Century Philosophy* (New York: The Philosophical Library, 1947), p. 324.

nature and human experience. As the environment may be but the endowment "writ large", we shall, following Plato's procedure in the *Republic*, first consider the idealist's interpretation of the environment and then deal with human endowment.

The obvious analysis of human environment is into the two main divisions which we may characterise respectively as the material and the mental, or the physical and the cultural. There is a natural environment and a psycho-social environment, a world of things and a world of men. One of the main tenets of naturalism is the adaptation of the living organism to its environment. But it is now contended that the adaptability is mutual, and that the environment must be suited to the nature of the organism. The chemical structure of the universe is favourable to the welfare of the organism. Fitness is a reciprocal relationship. "In the world of modern science, a fit organism inhabits a fit environment."[1] "Somehow beneath adaptations, peculiar and unsuspected relationships exist between the properties of matter and the phenomena of life; that the process of cosmic evolution is indissolubly linked with the fundamental characteristics of the organism, that logically, in some obscure manner, cosmic and biological evolution are one."[2] Tinbergen[3] adds that instinctive behaviour is dependent on external and internal causal factors. In most cases both kinds exert an influence and they supplement each other.

It is not generally realised how great the difference is between man's physical environment and the physical environment of the animal. The animal has for the most part to take the environment as it finds it, to submit or succumb, but man has throughout the ages kept fashioning his physi-

[1] Lawrence J. Henderson, *The Fitness of the Environment* (New York: The Macmillan Co., 1913), p. 132.

[2] Henderson, *The Fitness of the Environment*, p. 278.

[3] N. Tinbergen, *The Study of Instinct* (Oxford University Press, 1951), pp. 101, 122.

cal environment out of all recognition to suit his own needs and purposes. As Stout said[1] many years ago: "To understand the full importance of this point of view we must try to realise in how thoroughgoing a way civilised society has mastered its material environment and reshaped it for the satisfaction of its own needs. Wherever we turn our eyes, we are constantly confronted with external embodiments of human will and intelligence. We must go to the wild moorland or the lonely mountain side to find mere nature, and even there we do not quite succeed." Some writers have remarked on this changeability of the human environment and recognised what it entails in education, but have failed to see in it the results of man's inventive powers, to assign it to its real origin in aspects of endowment which the animals do not possess but which are peculiar to man. The existence of this characteristic type of physical environment—the artefactual, the main feature of which is change—makes demands on education which at once distinguish it from the mere behaviour or training of animals.

The changes in man's physical environment are evidently correlated with his special capacity for inventiveness. It is only, however, when we come to consider man's cultural inheritance, when we reach "the realm of ends"[2] with all that man has produced in his efforts to realise these ends, that we can in any adequate degree appreciate the immensity of the task of education. This spiritual or cultural environment is an environment of man's own making; it is a product of man's creative activity; it makes possible man's freedom, for, as Bosanquet has observed, "no individual which has a foreign environment can act in a way purely self-expressive".[3] Man himself has set the problem

[1] G. F. Stout, *The Groundwork of Psychology* (London: University Tutorial Press, 1899), p. 105.

[2] Cf. The title of James Ward's Gifford Lectures, *The Realm of Ends: or Pluralism and Theism* (Cambridge University Press, 1911).

[3] *Logic* (Oxford University Press, 1911), vol. ii, p. 255.

which he is called upon to solve, and his attitude to this environment is something far removed from the animal's attitude of adaptation to its natural but alien environment. He cannot be said to be the creature of his environment in the sense in which that term is applied to any other animal. "This is why human life has a value, why education is a mission."[1] When man emerges in the course of evolution, instead of being content like the animals to take things as he finds them, he sets about to question, to inquire into their origin, to embellish what he finds or produces, to strive after something better than the given—in a word, to progress, since "progress is man's distinctive mark alone"; and thus knowledge, art and morality arise out of his divine discontent.

Not only does man's cultural environment differ from his material environment in being self-created, but it also follows from this that it is free from some of the limitations of a material environment. Material goods are restricted in quantity and their possession is governed by competition, whereas "it is a sublime though obvious truth, that the highest goods are not diminished by being diffused".[2] We are consequently constrained to ask: Should not education train the child for the enjoyment of the non-competitive factors in experience? When individuals come to prize the higher things of life which each may enjoy without detriment to others, social discontent will disappear; when nations realise that mere extent of territory does not imply national greatness, and when they strive in friendly rivalry to enlarge the boundaries of the spiritual realm, wars will cease. If education should not at present prepare for such a day, philosophers should at least herald its possibility.

The spiritual possessions differ also from the material in that they have to be reacquired by each individual for him-

[1] G. Gentile, *The Reform of Education*, translated by D. Bigongiara (London: Benn Bros, Ltd., 1923), p. 84.

[2] J. Ward, *The Realm of Ends*, p. 112.

self; they cannot be simply inherited like material wealth. "Here one generation but passes on and renovates the field of tillage for the next," as R. L. Stevenson expresses it,[1] or, as Henry Jones said[2]: "Man is not the passive recipient of any spiritual gift. We cannot inherit or bequeath virtues. A man's moral and intellectual possessions are the conquests of his own sword. All the spiritual learning, its enterprise, its growing purpose will pass him by, leaving him utterly poor in soul unless he arrests it and personifies it anew in his own attainments." As these spiritual possessions have to be reacquired by each one for himself, men are more nearly equal in respect to them than is the case with material possessions; this is the real basis of the democracy of knowledge. When once acquired, these spiritual factors in experience also become permanent possessions of which the individual cannot be deprived by the chances of fortune, and, it may be, permanent possessions of the race.

On this need to reacquire at each stage the spiritual possessions of the race rests the necessity for education. The work of education, thus regarded, is to transmit from one generation to the next, with the least possible loss, the cultural or spiritual inheritance of man.[3] "Our education is human," as Gentile says,[4] "because it is an action, not a fact; because it is a problem that we always solve and have to keep solving for ever." As this spiritual inheritance is the product of man's creative activity it is ever increasing, and not only must education recognise and make provision at each stage for this enrichment of experience, but it must

[1] *Across the Plains.*

[2] *Social Responsibilities* (Glasgow: R. Maclehose & Co., 1905).

[3] Bacon regarded education as a form of tradition. G. K. Chesterton has expressed the same view in *What's Wrong with the World?* (London: Cassell & Co., 1910), pp. 195–6. "Education is a word like 'transmission' or 'inheritance'; it is not an object but a method. It must mean the conveying of certain facts, views, or qualities to the last baby born. They might be the most trivial facts or the most preposterous views, or the most offensive qualities; but if they are handed on from one generation to another they are education. Education is tradition."

[4] *The Reform of Education*, p. 35.

also play its part in fostering this development. So long as the world advances and progress persists, the material to be transmitted will continue to increase; new claims will constantly be made on education; a revaluation of old educational values will from time to time be necessary; more efficient and more economical methods will have to be devised to effect this increasing transmission; there will consequently always be an educational problem.

The analysis of the cultural environment presents difficulties, for whereas a threefold division is general, differences of opinion prevail as to the three factors to be recognised. As typical of the threefold division we may cite Horne's statement[1]: "The elements in the spiritual environment are three in number. The reason for this number lies in the nature of mind. The spiritual environment is the achievement of the mind of the race; these elements are consequently declaratory of the nature of the mind of the race; but the racial mind is but the individual mind writ large: psychologists are agreed that the different ultimate modes of being conscious, the final phases of mental life, are three in number, viz., the mind knows, and feels, and wills, that is, it has an acquaintanceship with the external world in which it takes a certain pleasure or displeasure, and on which it works certain energetic reactions. Consequently the three elements of the spiritual environment are the intellectual, what is known; the emotional, what is felt; and the volitional, what is willed. Considering the objects of these mental activities, the mind knows truth and avoids error; it feels, as its highest object, beauty and avoids ugliness; and it wills, in momentous issues, goodness and avoids evil. . . . Truth, beauty, and goodness, then, are the race's spiritual ideals, and the adjustment of the child to these essential realities that the history of the race has disclosed is

[1] H. H. Horne, *The Philosophy of Education* (New York: The Macmillan Co., 1907), pp. 101–2.

the task of supreme moment that is set for education."

This analysis is unsatisfactory and incomplete. With such a classification difficulty is experienced in finding a place for religion. Is it to be sub-sumed under ethics, as is usually done, or under aesthetics, with which it has a much closer affinity, as proposed by Horne?[1] Matthew Arnold's conception of religion as morality touched with emotion would make it share in both. No threefold division is, however, adequate. Religion has the same absoluteness as truth, art or morality, and it does not seem to be advisable, merely for the sake of a superficial consistency, to adopt a threefold classification. To truth, beauty and goodness must be added the ideal of the holy or the sacred, the corresponding attitude of the individual being, according to Otto,[2] "the religious bliss that may come in worship".

The analysis presented by Horne is based on the argument from analogy, always a treacherous proceeding. He argues from the fundamental aspects of the mental process to the products of mental activity. Now the former—cognition, conation, feeling—can be dissociated from one another only theoretically; in every practical activity of mind they are all involved, although varying in degree. In knowing, conation and feeling as well as cognition are involved; in willing all three are likewise present. The three aspects then enter into intellectual inquiry, into aesthetic appreciation and into ethical endeavour. There is no reason why they should not also enter into the religious experience of worship. The fundamental aspects of the mental process are not separable activities giving rise to mental products of different types, as Horne's analysis assumes; his argument is admittedly based on an assumption which modern psychology cannot countenance. Even if we assume the validity of the method

[1] *The Philosophy of Education.*

[2] R. Otto, *The Idea of the Holy*, translated by J. W. Harvey (Oxford University Press, 1931), p. 17.

adopted by Horne, we are not thereby committed to a threefold division, as the threefold classification of the aspects of the mental process, current since the time of Kant, has been abandoned by certain modern psychologists[1] in favour of a fourfold division. Were Horne's principle valid, the analogy of the aspects of the mental process would support a fourfold division of the cultural environment.

The rejection of the threefold division of the spiritual environment of man is not, however, an adequate justification for regarding religion as independent of morality and art. To demonstrate that religion is at least co-equal with morality—and a like argument applies to its relationship to art—it is incumbent on us to show positively that its ideal is different in kind from that of the latter and that the attitude it induces in the individual is other than that implied in ethical endeavour. Before proceeding, however, with this task we may suggest some general considerations for the dissociation of the two concepts. Religion is not morality; the very employment, in most languages, of two different terms to characterise them is a presumption in favour of the view that mankind has been attempting to designate two distinct types of experience. Some religions, the Greek, for example, have been essentially immoral. It is doubtless also possible for morality to exist both in a nation and in an individual independently of religion; of the former, the Japanese morality in early times has been given in illustration, and of the latter certain nineteenth-century philosophers. The incompleteness of the lives of those who, availing themselves of all that religion has accomplished for the world, yet profess to be content with a mere morality, has, however, found noble expression in the statement[2]: "In the mansions of their hearts they have built

[1] Cf. G. F. Stout, *The Groundwork of Psychology*.

[2] Lord Hugh Cecil, The Parliamentary Debates, vol. cvii, 1902. Education Bill, 6th May, 1902, p. 850 (abridged).

a room, richly gemmed, hung round with all that is beautiful in art and literature. The sword of Justice is there; the sceptre of Righteousness, too, is there, and even the robe of Loving Unity and Honour. Despite all these regalia it is an empty room, for the Throne is vacant." The difficulty which we experience in dissociating morality from religion arises from the fact that Christianity is essentially a rational and ethical religion. But as Francis Thompson has remarked[1]: "The astonishing divorce of religion from morality—nay, alliance of religion with immorality—so unthinkable to the northern mind, has always been and still is a quite natural thing to the childlike southern temper."

When we compare directly the ideals of morality and religion, we find that fundamental differences disclose themselves. The ethical ideal embodied in the moral law is something to be attained, something which only by man's endeavour can become real. The religious ideal is by its very nature postulated as real; it is always regarded by the religious individual as a complete and self-subsisting form of existence, as in every way perfect. God, or the religious ideal, is "the ocean that knows no shore, the fullness that never ebbs". The ideals of morality or religion appear therefore distinct; and if, with Kant, we assert the absoluteness of the moral law, we must at the same time at least attribute uniqueness to the religious ideal or God.

In his work on *The Idea of the Holy*, Otto contends that "the holy" is a category of interpretation and valuation peculiar to the sphere of religion, a valuation only belonging to the spirit of man; it contains a quite specific element or "moment" which cannot be equated to the moral, the same being true of the category of the beautiful. This element is primary, unique, underivable from anything else. Otto's

[1] *Saint Ignatius Loyola* (London: Burns & Oates, 1909), p. 24. Cf. R. Otto, *The Idea of the Holy*, p. 53: "None the less a profoundly humble and heartfelt recognition of 'the holy' may occur in particular experiences without being always or definitely charged or infused with the sense of moral demands."

analysis of the religious experience will render inadmissible the easy identification of religion with morality—and its consequent annihilation.

When we seek to distinguish on more general grounds the religious attitude from the moral attitude, we find that the religious believer habitually maintains a practical and contemplative intercourse with what he believes to be God, God being for him the best he knows, the symbol of perfection. In contrast to the religious attitude, the ethical life is a life of struggle; the moral ideal, after the attainment of which we strive, recedes as we approach. The moral battle goes against us even unto the setting of the sun. Incompleteness, dissatisfaction characterise the moral life; success but opens up the way to further conflict, whereas in the religious life the individual feels that even if the battle is not already won, he is at least on the side that cannot be vanquished. When we identify ourselves with the whole, or, in religious language, submit our wills to the will of God, we then look upon things, in Spinoza's phrase, *sub specie aeternitatis*, and thereby attain a satisfaction which morality, art or knowledge can neither give nor take away.

Religion then must be given a place with morality, art and knowledge as aspects of the spiritual environment of man; all four are different forms in which the creative activity of man manifests itself. Each is unique, but they are not mutually exclusive. Various attempts have been made to reduce one aspect to another; thus for Socrates morality is dependent on knowledge, and for Fichte religion is subordinate to knowledge. The aesthetic category is supreme for Schiller, Herbart and Nietzsche, whereas for Plato and Fichte art is subordinate to morality, the latter maintaining that nothing is aesthetically beautiful that is not morally true. At different ages in the world's history religion has dominated knowledge, art and morality. Philosophically the four categories may be regarded as different angles from

which the Absolute is viewed; practically they may be regarded as interwoven in the fabric of life; educationally each may be regarded as an aspect of personality, and the principle of correlation in teaching demands that for the full realisation of any one the others must not be neglected.

If, then, we divide the human environment into natural or material, and psycho-social or cultural, and the former again into the physical and technical, the latter into intellectual, aesthetic, ethical and religious, we must conclude that any system of education which claims to be comprehensive must prepare the child to appreciate all these aspects, and that a system of education which ignores any one is necessarily incomplete. The idealist in education, believing that the intangible values are the ultimate and enduring realities, will also emphasise the spiritual aspects of experience, insisting that knowledge, art, morality and religion are the aspects of life of supremest moment.

The child's endowment must likewise be compatible with an idealistic philosophy. If we eliminate instincts, it is comparatively easy to maintain the modifiability of human endowment. Impulses and reflex actions can be conditioned. Perception, as we have shown, is to a large extent determined by subjective factors which are under human control—whether intelligence is a unitary factor or a complex of correlated specific factors, its development is affected by cultural influences. Temperament can also be reconditioned. We must not, like the naturalists, neglect to posit in man's endowment the elementary bases of values. Schiller, in *Studies in Humanism*, dealing with "The Relation of Logic to Psychology", has asked: "How can values arise in the human mind?" We might equally well ask, "How can instincts arise in animal bodies?" Values may be, and doubtless are, "data" for psychology, primary elements, basic factors of our psychical nature, and the only profitable question that can be asked is how they are affected by, and

how they influence, the other primary psychical factors. It is unscientific to assume that they merely "evolve" out of the latter; the term "evolve" is too often employed to mask a transition from a primitive aspect of experience to another aspect, not merely quantitatively but qualitatively different. Thus Otto contends[1] that the "ought" of morality is "a primary and unique meaning, as little derivable from another, as blue from bitter", and that it "is only 'evolvable' out of the spirit of man itself, and then in the sense of being 'arousable' because it is already potentially implanted in him"; and in regard to religion he maintains[2]: "There is, of course, no 'transmission' of it in the proper sense of the word; it cannot be 'taught', it must be 'awakened' from the spirit." To ignore such factors is to render educational psychology profitless.

From the day of his birth the child's innate capacities or propensities—impulses, reflexes, the primary elements of values, etc.—are aroused by environmental stimuli and modified by environmental influences; their main characteristic is just their modifiability or plasticity, and this is reflected in the long infancy of the human animal. His physical needs are regulated by habit; habit is said to be second nature, but habit acts right from the dawn of life, and thus the child's first or original nature has no opportunity for manifesting itself. Imitation functions early, and social pressure is exerted thereby, and the force of the cultural inheritance begins to bear on him through language. Life thus becomes a habit-[3] and a social-construction, and "education becomes the art of taking advantage of the helplessness of the young".[4] Rousseau would try to save the original nature of man by classifying habits into natural habits and social or conventional habits, approving the

[1] *The Idea of the Holy*, pp. 44–5. Cf. p. 118. [2] *The Idea of the Holy*, p. 62.
[3] Both Bernard and Dewey employ "habit" in this extended sense.
[4] J. Dewey, *Human Nature and Conduct* (London: Allen & Unwin, Ltd., 1922), p. 58.

former and condemning the latter, but all habits in the life of man are socially initiated and maintained. Findlay admits[1] that a good deal of home and school-nursery discipline is contrary to nature; in a sense it is all contrary to nature. The question is not whether it is natural or not, but whether it is wisely or unwisely imposed. Thus the greater freedom enjoyed by the modern child is not the result of an instinct of self-assertion in him, but of a change of view and consequent change of treatment on the part of adult society, the parent and the teacher having come to possess truer views of the meaning of life and of the methods by which their aims can be attained.

The correction of the instinctivist point of view by the environmentalist should not, however, lead us to neglect the element of truth in the former. Such neglect would result in regarding education as too easy a process, as many views of education do at present. The psychologists who have adopted and advocated the instinctivist standpoint have done a service in emphasising the intimate relationship between the physical nature of man and his mental life, thus correcting the view of mind as independent which naturally followed from the psychological doctrine of the parallelism of mind and body; their defect was that their explanations hardly got beyond the physical behaviour of man. The same intimate relationship between body and mind, but in this case with mind as the determining factor, is one of the assumptions of psycho-analysis. Education must then recognise, and, as we shall see later, reconcile the inborn nature of man with the cultural products evolved by society.

The relationship existing between the innate tendencies of the child and his environment has been variously characterised. Adaptation is evidently inadequate. Adjustment is even

[1] *The Foundations of Education* (University of London Press, 1925, 1927), vol. p. 13.

more unsatisfactory. By reason of the reciprocal relationship between the environment and the organism terms like co-ordination, correspondence, commerce and compounding have been proposed. Allport[1] has expressed the relationship algebraically thus: Personality = *f* (Heredity) × (Environment), explaining that the two factors are not added together but are interrelated as multiplier and multiplicand. If either were zero, there could be no personality. Somewhat surprisingly when psycho-analysts refer to the process of education, they almost unanimously, although doubtless unwittingly, employ the term conflict. Bernard[2] quotes from Herrick's *Introduction to Neurology* to the effect that "conflict" is inherent in the cosmic process, or at least in the biological part of it, from beginning to end, and that out of this conflict intelligence was born. If life itself thus exhibits conflict, education will reflect it; accordingly, we find Ernest Jones maintaining[3]: "It is commonly not realised how extensive is the work performed by these influences [the reforming influences of education], nor how violent is the internal conflict they provoke before they finally achieve their aim. Without them the individual would remain a selfish, jealous, impulsive, aggressive, dirty, immodest, cruel, egocentric and conceited animal, inconsiderate of the needs of others, and unmindful of the complicated social and ethical standards that go to make a civilised society." Rivers, in his *Instinct and the Unconscious*,[4] likewise says: "The process of education in childhood consists, or should consist, in the direction of innate or instinctive tendencies towards an end in harmony with the highest good of society of which the child is an active member.

[1] C. W. Allport, *Personality: A Psychological Interpretation* (London: Constable, 1938), p. 106.

[2] L. L. Bernard, *Instinct: A Study in Social Psychology* (Allen & Unwin, Ltd., 1924), pp. 52–3

[3] *Papers on Psycho-Analysis* (London: Baillière, Tindall & Cox, 1903), p. 124.

[4] W. H. R. Rivers, *Instinct and the Unconscious* (Cambridge University Press, 1920), p. 151.

Childhood is one long conflict between instinctive tendencies and the social traditions and ideals of society. Whether the outcome of this conflict is to be a genius or a paranoic, a criminal or a philanthropist, a good citizen or a wastrel, depends in some measure, we do not yet know with any degree of exactness, in what measure, on education." A writer on *The Psychology of the Unadjusted School Child*[1] finds himself inevitably committed to the concept "conflict", maintaining: "Any educator who thinks only of making easy the road to adult character is attacking the problem in the wrong manner; no programme which would eliminate struggle for the individual is a sound one. The critical thing is to see that the adjustment that is made as a result of the conflict is one that will benefit the individual." Another writer has not hesitated to entitle a work *Youth in Conflict*,[2] and in it to say: "The child, struggling from infancy to win affection and esteem from each member of the family, is living in a world of conflict. This is healthy. This is splendid. The normal child should learn his way by acts and attitudes which are pleasing to good parents, and bring rewards of approval, success and love. It is conflict that makes life interesting." And Bagley, in *Determinism in Education*,[3] protesting against the wrong conception of discipline and freedom in education, although not employing the term "conflict", warns us that education must reflect in each generation this element of struggle and conquest.

These citations, and they could be multiplied, may bring us to realise that education is not an easy adaptation to a simple environment of innate characteristics, either instinctive, as the naturalists contend, or ideal, as Rousseau, Fichte and Froebel maintained. There is likewise in the con-

[1] J. J. B. Morgan, *The Psychology of the Unadjusted School Child* (New York: The Macmillan Co., 1924), p. 31.

[2] Miriam Van Waters, *Youth in Conflict* (London: Methuen & Co., 1926), p. 48.

[3] W. C. Bagley, *Determinism in Education* (Baltimore: Warwick & York, 1925), p. 160.

notation of "conflict" something of more moment than "the struggle for existence"; it suggests rather a struggle for freedom.

The conflict in which the child is engaged is many sided, but is mainly between different aspects of his cultural inheritance. Through all the complexities and difficulties it is the task of the educator to make straight a highway for the child, to see to it that the conflict is not quite beyond his strength, that the demands are not too onerous, to save him, as Ward[1] has cautioned us, from "the demoralisation of defeat". And if the teacher cannot aid, he must see to it that he does not hinder or obstruct. In the past education has too frequently been a conflict, a conflict between the teacher and the pupil; and that is unpardonable. *The Handicaps of Childhood*[2] are sufficiently penalising and numerous without the teacher adding to their number. The child, too, must be given freedom to fight, but not to retreat and abandon the struggle. It is a conflict which he must wage for himself, and the victory, to have any value for him, must be his very own. Hence in the new education it is the teacher's privilege to direct, encourage, sympathise. Only where he adequately realises the nature of the conflict in which the child is engaged, is his intervention likely to be prudent and skilful, is he *aptus ad discendum*.

But if the process of education is a conflict, the end is a reconciliation. The purpose of education is to enable the child to reconcile himself to reality in all its manifestations, not merely to adapt himself to a natural environment. Such a reconciliation is not impossible, because, as we have indicated, the cultural environment is the product of man's creative activity, and the physical environment has likewise been largely fashioned by his inventive powers. The con-

1 *Psychology Applied to Education* (Cambridge University Press, 1926), p. 42.
2 Cf. H. Addington Bruce's work under this title (London: Kegan Paul, Trench, Trübner & Co., Ltd., 1917).

flict is not with something quite alien to man; it is with those of his own household; it is a fight that has begun within himself. When we recognise the priority of man's unique cultural environment, when we realise that in the transmission and increase of this cultural inheritance through its constant recreation lies the supreme task of education, that man possesses spiritual powers adequate to the task, our philosophy of education is idealistic, and doubtless only then adequate.

Index of Topics

Index of Names

MENTIONED IN THE TEXT

Philosophical Bases of Education

Every system of education must have an aim, and the aim of education is relative to the aim of life. Philosophy formulates what it conceives to be the end of life; education offers suggestions how this end is to be achieved. From this standpoint, the author proceeds to an exposition and discussion of the major philosophical schools and their implications for education.

For this new edition, which has been entirely reset, Dr Rusk has revised and enlarged the text, and has subdivided some of the chapters.

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